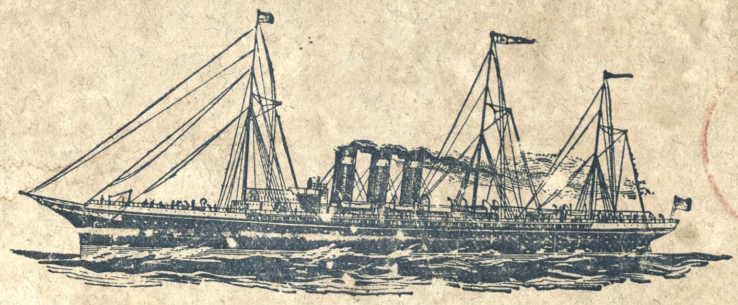
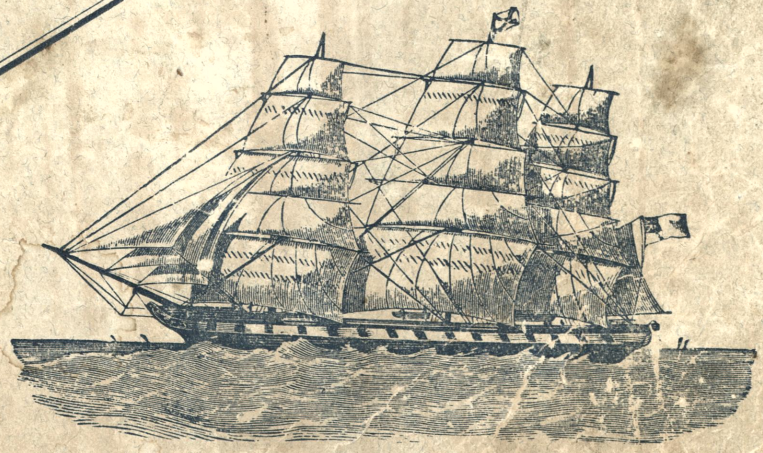


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1902

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L-30

Important to Shipowners and Captains.

SHOULD BE INSERTED IN EVERY SPECIFICATION.

THE PAGET COMPASS

WITH IMPORTANT IMPROVEMENTS PATENTED,

Rendering it the MOST PERFECT STANDARD COMPASS for an Iron Ship,

— BEING —

Steady, Sensitive, Compensated,

And possessing the great advantage over all other Standard Compasses that Azimuths and bearings can be taken with it by night or day with increased accuracy, WITHOUT REMOVING THE BINNACLE TOP.

The Correcting Magnets are also mounted in an improved manner with Gearing, by means of which a more perfect adjustment can be made.

The attention of Owners is drawn to the SAVING IN DISTANCE, and consequent great SAVING OF FUEL and OTHER EXPENSES, obtained by the use of a perfectly compensated compass, which in a single voyage will often more than pay for itself, of which the following is an instance:—The S.S. "Maryland," fitted with the PAGET COMPASS, on her voyage home across the Atlantic, only exceeded the great circle distance of 3,110 miles by 12 miles.

☞ *A Full Description of, with Illustrations and complete Instructions for adjusting the Paget Compass, sent free on application.*

The PAGET COMPASS is mounted in a Binnacle of improved construction on handsome polished Teak-wood Stand, Brass Shade with Revolving Lamps, Correcting Magnets all Geared, Soft Iron Correctors, all Fixings, &c., complete.

PRICES:

CLASS A.—10-Inch Card, for Mail and First-Class Steamships, ... **£50.**
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The above Prices include Fixing and Adjusting.

SMALLER SIZE FOR YACHTS MADE WITH 8-INCH CARD.

The PAGET COMPASS CARD. alone in Box, can be used in any good Compass.

8-in.	9-in.	10-in.	10½-in.	11-in.	12-in.
35s. ...	**37s. 6d.** ...	**40s.** ...	**42s.**	**45s.** ...	**50s.**

SHOULD BE ON THE BRIDGE OF EVERY STEAMSHIP.

The AZIMETER

(PATENTED).

THE attention of Owners and Officers, also of everyone interested in the safe navigation of the costly Iron and Steel Vessels of the present day, is earnestly drawn to this New and Improved Instrument which we have just brought out. As its name implies, it is an instrument for measuring or indicating the Azimuth or compass bearing of any object from the ship, thereby checking the ship's course as steered by the compass, and showing the deviation or error of the same, caused by the magnetism of the vessel herself.

Many instruments have been constructed for this purpose, of various patterns, but they all possess the following great defects amongst others, viz.:—1st. The dial of the instrument is suspended in outer gimbals or rings with the sights attached to the same, consequently the least pressure on the dial, such as the wind, or the observer's hand in manipulating and using the instrument, puts the dial out of its true horizontal plane, and the sights out of the vertical, causing a considerable error in observing. 2nd. The difficulty of illuminating these instruments at night time when taking Azimuths of the stars, or bearings of lights.

In our new instrument, the **Azimeter**, we have overcome both these difficulties with marked success, enabling Azimuths to be taken and read off, both by day and night, with increased accuracy and the greatest ease and convenience. We confidently recommend it to shipowners as a most valuable and necessary adjunct to the safe navigation of their ships. The instrument being entirely made of brass, in a most substantial manner, and mounted on a pillar stand, can be fixed on the bridge or other most convenient spot, and is always ready for taking Azimuths of the sun and stars, bearings of the land, and angles between various fixed objects for determining the ship's position and distance off the same. The instrument consists of *the brass pillar stand; the brass bowl*, in which the instrument is mounted; this consists of a revolving brass ring or verge with a plate glass, across the diameter of which a black line is drawn to indicate the bearing line. Below this plate glass a compass dial painted on opal glass or some other translucent material is fitted, so that any Azimuth or known bearing of an object can be set and clamped to the above diametrical or bearing line, or any course to the ship's head mark of the instrument, as may be required. On this revolving verge or ring four stout metal ribs are mounted, supporting and holding a smaller fixed ring. On the top surface of this ring is a small metal plate with a variation scale and a slot with a clamp screw, enabling the sight or observing mirror to be corrected for variation, so that the instrument will show magnetic bearings if required. We now come to an important part of the instrument, viz., the Azimuth sight or mirror, which is mounted on a stem with a balance weight at its lower end, and suspended in small gimbal rings. This fits into the inside of the upper ring, and being so suspended the sight or mirror always remains truly vertical, notwithstanding the motion of the vessel, and from its mounting, and there being so little surface, it is practically not affected by the wind, neither does the observer in using it have to exercise care in keeping the dial of the instrument level; but, on the contrary, he can steady himself on this instrument, and get a much better observation. This sight is fitted with a mirror and shades, so mounted that any object can be observed from the horizon to the zenith; and on the reverse side of the mirror frame an ivory plate with a centre line is placed so that the sun's shadow can be used. A small electric lamp, with an accumulator, is fitted inside the bowl, and softly illuminates the glass compass dial, the ship's head mark, and shows the diametrical or bearing line on the plate glass, thus enabling the Azimuths of the stars to be taken and read off with the utmost facility, and obviating the inconvenience and objectionable glare arising from the use of hand and other lamps as at present in use. The lamp will run four or five months without re-charging.

Extra Stands, with Bowls, can be supplied with the **Azimeter**, and fixed in different parts of the ship, as found to be most convenient for observations, and the instrument can then be shifted from one stand to another as required.

PRICE, complete with 8½-in. dial, ... **£20.**

SMALLER SIZE for YACHTS with 6-in. dial.

HENRY HUGHES & SON, Marine Opticians, 59 Fenchurch St., LONDON.

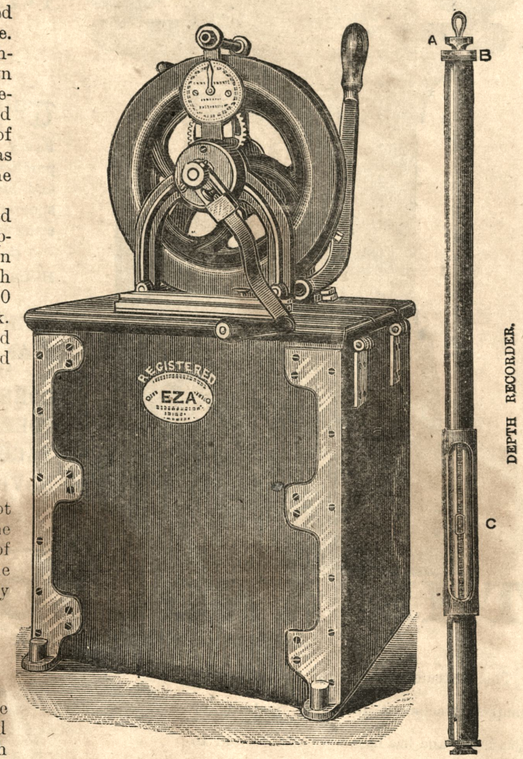
Telegraphic Address—"AZIMUTH, LONDON."

NAVIGATIONAL SOUNDING MACHINE.

NEW PATENT.

IN 1870 a late member of this Firm invented and perfected a Patent Atmospheric or Pneumatic Sounding Machine. For reasons which will be obvious to our friends, we withdraw this instrument, while we handled another well-known machine on the same principle as our own. The requirements of our business, however, demanded that we should manufacture and sell to the buyer direct, and the result of this policy has been a very large increase in the demand, as we are now able to supply this machine at about half the price of the one we worked under an agency.

This machine is fitted with long glass chemically prepared tubes to show the depth, and hydrostatic gauge is also supplied which registers automatically the depth on a scale on the instrument. It is very strongly constructed, and with a register to show the line paid out, of which there is 300 fathoms of a fine steel stranded wire which does not kink. The whole machine comes off the top of the box and is stowed inside, thus preventing it becoming damaged by rust and other causes.



Continuous Sounding.

ADMIRALTY NOTICE TO THE ROYAL NAVY.

The frequent use of the lead is desirable, and it must not be supposed that a single cast is sufficient, a continuous line of sounding is imperative, when the ship is out of sight of land, and the position cannot be obtained by observation, the value of the lead is greatly enhanced by the frequency of its use.

BOARD OF TRADE NOTICE.

SPECIAL WARNING TO MARINERS.—In consequence of the considerable number of British vessels that ground off the coast of Holland, when bound through the North Sea, it is thought desirable to CALL THE ATTENTION OF MARINERS TO THE ABSOLUTE NECESSITY FOR THE USE OF THE LEAD when nearing or passing along this shore in thick weather. . . . THE SAFETY OF VESSELS, therefore, can in thick weather ONLY BE ASSURED BY TIMELY USE OF THE LEAD.

From the above it will be seen that the authorities are fully alive to the importance of the use of reliable mechanical soundings, which this machine will give WITHOUT STOPPING the SHIP. We are willing to give a free trial to any intending purchaser.

NEW ELECTRIC SHIP LOG (Logometer).

Whyte's Patent.

It is generally admitted that the proper place for a Log is the bridge or wheelhouse, or where the officer in charge of the watch can see at a glance the distance the vessel has run. The Logometer has been designed to fulfil this long-felt want, and is the result of long investigation and practical experience. It can be placed in any part of the ship and a true record seen at once from the bridge, and is now rapidly replacing the antiquated taffrail log. The faults and shortcomings of previous inventions (which have been failures) have all been overcome, and in fact a complete revolution has been effected, and a thoroughly reliable instrument which can be adjusted for mechanical error can now take its proper place on the bridge beside the other navigating instruments.

WHYTE, THOMSON & CO., SOLE MAKERS, 144 BROOMIELAW, GLASGOW.

WORKS—Harmony Row, GOVAN.

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58 GREAT CLYDE STREET,
GLASGOW.

CALENDAR FOR 1902.

WITH LONDON DAILY TIDE TABLES,

GIVING DEPTH of WATER on SILL of EAST INDIA DOCK, NEW ENTRANCE.

N.B.—High Tides, with probable overflows, may be expected on those days marked by a thick line.

JANUARY.

Day of W'k.	Day of Mon.	Morn. H. M.	Aft. H. M.	Depth on Sill, E.I.D. New Ent. FT. IN.
W	1	6 32	6 54	29 1
Th	2	7 18	7 42	28 3
F	3	8 9	8 40	27 7
S	4	9 15	9 52	27 4
☿	5	10 30	11 4	27 6
M	6	11 35	—	27 9
Tu	7	0 5	0 32	28 6
W	8	0 56	1 17	29 2
Th	9	1 38	1 58	29 6
F	10	2 16	2 33	30 0
S	11	2 50	3 7	30 5
☿	12	3 24	3 42	30 7
M	13	4 0	4 19	30 8
Tu	14	4 38	4 56	30 6
W	15	5 14	5 33	30 3
Th	16	5 54	6 15	29 7
F	17	6 38	7 4	28 9
S	18	7 32	8 2	28 3
☿	19	8 36	9 13	28 4
M	20	9 56	10 37	28 7
Tu	21	11 17	11 56	29 5
W	22	—	0 29	29 11
Th	23	0 58	1 26	30 4
F	24	1 52	2 15	30 11
S	25	2 38	3 1	31 5
☿	26	3 23	3 43	31 7
M	27	4 3	4 23	31 5
Tu	28	4 43	5 1	31 1
W	29	5 18	5 35	30 7
Th	30	5 54	6 13	29 8
F	31	6 32	6 53	28 6

FEBRUARY.

Day of W'k.	Day of Mon.	Morn. H. M.	Aft. H. M.	Depth on Sill, E.I.D. New Ent. FT. IN.
S	1	7 15	7 40	27 9
☿	2	8 8	8 42	27 2
M	3	9 21	10 4	27 1
Tu	4	10 45	11 22	27 2
W	5	11 55	—	27 8
Th	6	0 26	0 52	28 7
F	7	1 14	1 35	29 5
S	8	1 55	2 13	30 0
☿	9	2 30	2 47	30 8
M	10	3 5	3 23	31 2
Tu	11	3 40	3 58	31 4
W	12	4 17	4 36	31 4
Th	13	4 55	5 14	31 0
F	14	5 33	5 53	30 4
S	15	6 16	6 41	29 4
☿	16	7 8	7 38	28 5
M	17	8 11	8 50	28 0
Tu	18	9 35	10 22	28 2
W	19	11 6	11 46	28 9
Th	20	—	0 21	29 3
F	21	0 52	1 17	29 9
S	22	1 41	2 4	30 7
☿	23	2 25	2 44	31 1
M	24	3 3	3 21	31 6
Tu	25	3 40	3 57	31 5
W	26	4 14	4 31	31 3
Th	27	4 47	5 4	30 9
F	28	5 19	5 35	30 2

MARCH.

Day of W'k.	Day of M'th.	Morn. H. M.	Aft. H. M.	Depth on Sill, E.I.D. New Ent. FT. IN.
S	1	5 53	6 11	29 2
☿	2	6 32	6 56	28 2
M	3	7 22	7 50	27 3
Tu	4	8 22	9 1	26 9
W	5	9 47	10 32	26 10
Th	6	11 12	11 48	27 4
F	7	—	0 17	28 3
S	8	0 44	1 5	29 4
☿	9	1 25	1 45	30 3
M	10	2 5	2 23	31 0
Tu	11	2 40	2 57	31 8
W	12	3 16	3 35	31 11
Th	13	3 53	4 13	31 10
F	14	4 33	4 53	31 5
S	15	5 14	5 36	30 8
☿	16	6 0	6 26	29 6
M	17	6 53	7 24	28 4
Tu	18	7 58	8 40	27 11
W	19	9 26	10 12	28 0
Th	20	10 54	11 33	28 7
F	21	—	0 8	29 1
S	22	0 36	1 1	29 6
☿	23	1 23	1 45	30 4
M	24	2 4	2 22	30 9
Tu	25	2 39	2 56	31 1
W	26	3 12	3 29	31 2
Th	27	3 46	4 3	30 11
F	28	4 19	4 35	30 7
S	29	4 51	5 6	30 1
☿	30	5 22	5 39	29 4
M	31	5 59	6 21	28 5

APRIL.

Day of W'k.	Day of M'th.	Morn. H. M.	Aft. H. M.	Depth on Sill, E.I.D. New Ent FT. IN.
Tu	1	6 46	7 13	27 6
W	2	7 43	8 16	26 11
Th	3	8 55	9 40	26 11
F	4	10 23	11 0	27 4
S	5	11 33	—	28 2
☿	6	0 2	0 27	29 3
M	7	0 49	1 9	30 4
Tu	8	1 30	1 50	31 1
W	9	2 9	2 29	31 9
Th	10	2 50	3 11	32 1
F	11	3 32	3 52	31 11
S	12	4 14	4 38	31 6
☿	13	5 1	5 25	30 9
M	14	5 50	6 18	29 6
Tu	15	6 46	7 17	28 5
W	16	7 52	8 29	28 0
Th	17	9 10	9 53	28 1
F	18	10 33	11 8	28 6
S	19	11 40	—	28 10
☿	20	0 10	0 35	29 3
M	21	0 57	1 18	29 11
Tu	22	1 38	1 56	30 4
W	23	2 13	2 30	30 7
Th	24	2 47	3 4	30 9
F	25	3 20	3 36	30 7
S	26	3 53	4 10	30 3
☿	27	4 27	4 43	29 11
M	28	5 0	5 16	29 6
Tu	29	5 35	5 56	28 9
W	30	6 19	6 44	28 0

MAY.

Day of W'k.	Day of Mon.	Morn. H. M.	Aft. H. M.	Depth on Sill, E.I.D. New Ent. FT. IN.
Th	1	7 13	7 43	27 4
F	2	8 16	8 52	27 3
S	3	9 33	10 9	27 8
☿	4	10 42	11 14	28 3
M	5	11 43	—	29 2
Tu	6	0 9	0 33	30 3
W	7	0 55	1 18	31 0
Th	8	1 41	2 3	31 6
F	9	2 26	2 50	31 11
S	10	3 13	3 37	31 10
☿	11	4 1	4 25	31 7
M	12	4 50	5 15	30 9
Tu	13	5 41	6 9	29 8
W	14	6 37	7 7	28 8
Th	15	7 38	8 11	28 2
F	16	8 46	9 22	28 2
S	17	9 59	10 33	28 5
☿	18	11 4	11 35	28 9
M	19	—	0 3	29 0
Tu	20	0 27	0 50	29 4
W	21	1 10	1 30	29 9
Th	22	1 49	2 8	29 11
F	23	2 25	2 41	30 1
S	24	2 58	3 14	30 2
☿	25	3 32	3 49	30 0
M	26	4 6	4 22	29 10
Tu	27	4 38	4 57	29 7
W	28	5 16	5 35	29 2
Th	29	5 57	6 20	28 7
F	30	6 45	7 12	28 1
S	31	7 42	8 11	27 9

JUNE.

Day of W'k.	Day of Mon.	Morn. H. M.	Aft. H. M.	Depth on Sill, E.I.D. New Ent. FT. IN.
☿	1	8 44	9 20	27 11
M	2	9 55	10 28	28 5
Tu	3	10 59	11 30	29 0
W	4	11 59	—	29 10
Th	5	0 26	0 52	30 9
F	6	1 19	1 44	31 3
S	7	2 9	2 35	31 8
☿	8	3 0	3 25	31 9
M	9	3 50	4 16	31 5
Tu	10	4 41	5 5	31 0
W	11	5 28	5 53	30 2
Th	12	6 20	6 47	29 1
F	13	7 13	7 40	28 4
S	14	8 9	8 39	28 1
☿	15	9 12	9 45	28 1
M	16	10 18	10 52	28 2
Tu	17	11 23	11 52	28 7
W	18	—	0 18	28 10
Th	19	0 42	1 3	29 0
F	20	1 23	1 43	29 4
S	21	2 3	2 21	29 7
☿	22	2 38	2 56	29 10
M	23	3 12	3 30	29 11
Tu	24	3 48	4 7	29 11
W	25	4 25	4 42	29 11
Th	26	5 0	5 18	29 10
F	27	5 37	5 58	29 5
S	28	6 21	6 45	28 11
☿	29	7 10	7 37	28 5
M	30	8 5	8 37	28 2

JULY.

Day of W'k.	Day of M'th.	Morn. H. M.	Aft. H. M.	Depth on Sill, E.I.D. New Ent. FT. IN.
Tu	1	9 10	9 46	28 5
W	2	10 21	10 55	28 9
Th	3	11 30	—	29 4
F	4	0 2	0 32	30 3
S	5	1 0	1 29	30 11
☿	6	1 56	2 23	31 4
M	7	2 48	3 13	31 8
Tu	8	3 37	4 2	31 7
W	9	4 26	4 49	31 3
Th	10	5 11	5 32	30 6
F	11	5 54	6 17	29 8
S	12	6 40	7 3	28 8
☿	13	7 27	7 52	27 11
M	14	8 19	8 51	27 7
Tu	15	9 25	10 3	27 7
W	16	10 38	11 11	27 9
Th	17	11 43	—	28 0
F	18	0 12	0 38	28 3
S	19	1 1	1 23	28 11
☿	20	1 43	2 2	29 4
M	21	2 20	2 36	29 9
Tu	22	2 53	3 10	30 2
W	23	3 27	3 45	30 5
Th	24	4 3	4 21	30 6
F	25	4 39	4 58	30 6
S	26	5 16	5 35	30 3
☿	27	5 55	6 17	29 10
M	28	6 41	7 6	29 1
Tu	29	7 33	8 4	28 6
W	30	8 39	9 17	28 3
Th	31	9 57	10 37	28 5

AUGUST.

Day of W'k.	Day of M'th.	Morn. H. M.	Aft. H. M.	Depth on Sill, E.I.D. New Ent. FT. IN.
F	1	11 15	11 51	28 10
S	2	—	0 24	29 10
☿	3	0 54	1 22	30 9
M	4	1 49	2 13	31 4
Tu	5	2 37	3 0	31 9
W	6	3 21	3 43	31 8
Th	7	4 5	4 26	31 5
F	8	4 45	5 4	30 11
S	9	5 23	5 41	30 1
☿	10	6 0	6 21	29 1
M	11	6 43	7 7	28 0
Tu	12	7 32	7 58	27 3
W	13	8 29	9 6	27 1
Th	14	9 47	10 28	27 3
F	15	11 5	11 38	27 8
S	16	—	0 9	28 2
☿	17	0 36	0 59	28 6
M	18	1 19	1 39	29 3
Tu	19	1 57	2 15	29 11
W	20	2 32	2 47	30 6
Th	21	3 4	3 22	31 0
F	22	3 39	3 57	31 1
S	23	4 16	4 34	31 2
☿	24	4 53	5 12	30 11
M	25	5 31	5 53	30 4
Tu	26	6 17	6 43	29 6
W	27	7 11	7 43	28 6
Th	28	8 18	8 59	28 0
F	29	9 44	10 27	28 2
S	30	11 6	11 44	28 7
☿	31	—	0 18	29 8

TIDAL CONSTANTS FOR PORTS IN UNITED KINGDOM AND FOR FOREIGN PORTS.

*Add to L. Br.	Ports in United Kingdom with Depths on Sills of Docks and Tidal Basins.	H. W. ○ & ● at Pl.	Rise. Sp.	Rise. Np.
h. m.	*Gives Greenwich Time.	h. m.	Ft.	Ft.
6 32	Londonderry, I.	8 1	7½	6½
	,, Harbour Depth,	—	20	18
7 52	Lowestoft, E.	9 57	6½	5½
	,, Lock Gates & Bar Depth,	—	16	14½
4 1	Lynn Deep, E.	6 0	23	16½
	,, Road,	—	23½	16½
	,, Harbour,	—	22½	15½
	,, Alexandra Dock Sill,	—	25	18½
9 42	Maryport, E.	11 26	25	19
	,, Elizabeth Dk. Sill Dph.,	—	21½	15½
	,, Senhouse Dock Sill ,,	—	25	19
2 2	Middlesbrough, E.	3 55	14	10½
	,, Dock Sill Depth,	—	23	20
11 37	Montrose, S	1 25	13	10
	,, Bar Depth,	—	33	27½
	,, Dock Sill Depth,	—	19½	16½
9 41	Morecambe, E.	11 26	27	21
	,, Harbour Depth,	—	23	17
4 33	Neath, W.	6 16	13½	—
	,, Harbour Depth,	—	26	17
	,, Briton Ferry Docks,	—		
1 54	Newcastle, Tyne, E.	3 46	10½	7½
	,, River Channel Depth,	—	29	26
5 24	Newport, Mon., W.	7 10	38	29
	,, Old Dock Sill,	—	32	23
	,, Alexandra Dock Sill,	—	37½	28½
4 34	Pembroke Dockyard, E.	6 12	21	15½
	,, Dock ent. Depth,	—	24	18
5 11	Penarth, W.	6 56	37½	29
	,, Dock Sill Depth,	—	35½	25½
10 43	Peterhead, S.	0 34	10½	8½
	,, Harbour Depth,	—	16	14
3 55	Plymouth Breakwater, E.	5 37	15½	11½
	,, Dock Sill Depth,	—	25	21
	,, Floating D'k Sl. Depth,	—	20	25½
10 39	Port-Glasgow, S.	0 18	9½	7½
	,, Wet Dock Depth,	—	19	17
	,, Wharf Outside ,,	—	28	26
4 25	Porthcawl, W.	6 8	28½	21½
	,, Dock Sill Depth,	—	27	20
	,, Basin ,,	—	30	22
	,, Harbour ,,	—	26	19
9 47	Portsmouth Dockyard,	11 41	13½	10½
	,, Harbour Ent. Depth,	—	31	28
	,, Town Quay ,,	—	17	14
4 19	Port Talbot,	6 1	27½	20½
	Dock Sill Depth,	—	23	16
	Preston, E.	11 49	10	4½
	,, Albert Edward D'k,	—	29	23
3 36	Queenstown, I.	5 1	11½	9
	,, Depth for any Ship.			
9 44	Runcorn, E.	11 30	17	8
	,, Old Quay Dock Sill,	—	17	8
	,, Bridgewater ,,	—	17	8
	,, Widnes ,,	—	14	5
1 31	Seaham, E.	3 24	14½	10½
	,, Dock Sill Depth,	—	16½	12½
6 10	Sharpness, E.	7 58	20	15
	,, Tidal Basin Depth,	—	28	15
	,, Inside Docks,	—	24	—
	,, Glo'ster Canal Sill,	—	18	—
1 31	Shields, North, E.	3 23	13½	10
	,, River Entrance Depth,	—	33½	30
	,, Tyne Dock Sill ,,	—	24½	21½
	,, Northumberland ,,	—	28½	20½
	,, Albert Edward Dock,	—	30	26½
9 37	Shoreham, E.	11 34	18	13½
	,, Harbour Depth,	—	21	16
	,, Canal Sill ,,	—	21½	16
9 56	Silloth, E.	11 40	20	20
	,, Dock Sill Depth,	—	28	22
	,, Marshall Dock ,,	—	22½	16½
8 38	Southampton, E.	10 30	13	9½
0 53		0 45		
	,, Dock Sill Depth,	—	31	27½
	,, Town Quay ,,	—	28	24
1 30	Sunderland, E.	3 22	14½	11
	,, Bar Depth,	—	19	15
	,, North D'k Sl. Depth,	—	20½	17
	,, South ,, ,,	—	20½	17
	,, Sea Lock, Inner Gates,	—	25½	22
	,, Outer ,,	—	27	23½
	,, Hendon Dock Sill,	—	20½	23
4 19	Swansea, Mumbles Light,	6 1	27½	20½
	,, North & Sth. D'k Sill,	—	23	16
	,, Prince of Wales ,,	—	32	25
1 52	Tees Bar, E.	3 45	15	12½
	,, Depth,	—	29	26
10 11	Troon, Clyde, S.	11 50	10	7½
	,, Tidal Basin Depth,	—	20	17½
9 30	Whitehaven, E.	11 14	26	19
	,, Dock Sill Depth,	—	21	14
9 20	Workington, E.	11 4	25½	20
	,, Dock Sill Depth,	—	21	11
	,, Harbour ,,	—	18	8
7 10	Yarmouth Gt. Road, E.	9 15	6	4½
	,, Harbour Depth,	—	19	5
	,, Bar ,,	—	14½	13

Add to L. Br.	Foreign Ports and Places. Europe.	H. W. ○ & ● at Pl.	Rise. Sp.	Rise. Np.
Gives h. m.	Local Time.	h. m.	Ft.	Ft.
	SPITZBERGEN.			
6 58	Bell Sound, ...	8 56	3½	—
10 26	Daves Island, South Gat,	0 24	5½	—
	NOVA ZEMBLA.			
11 32	Hakluyt Head, ...	1 30	4	—
	LAPLAND.			
6 10	Charlowka River, ...	8 8	12	—
7 2	Jukan Islands, ...	9 0	13	—
4 38	Nova Zembla Harbour, ..	6 36	10	—
7 17	Sviatoi Nos (Sweetnose), ..	9 15	14	—
	WHITE SEA.			
5 30	Arkhangel, ...	7 28	2½	—
9 22	Cape Voronov, ...	11 20	17	—
7 17	Inkanskie, ...	9 15	14	—
2 32	Kerets Point, Gulf of Arkhangel,	4 30	5½	—
11 17	Kouloi River, ...	1 15	20	—
7 19	Onega River, ...	9 17	7	—
⓪ 46	Sosnovets, ...	11 44	18	—
8 50	Trek Island, ...	10 48	20	—
	Tide runs from 2½ to 3½ hrs. longer in offing than by the shore.			
	NORWAY.			
11 32	Bergen, ...	1 30	4	—
11 12	Hammerfest, ...	1 10	9	—
10 2	Oxbaasheia Svee Fiord, ..	0 0	8	—
8 47	Ramso Fiord, ...	10 45	7	—
11 47	Tromco, ...	1 45	8	—
	JUTLAND.			
2 30	Hirtshals, ...	4 28	1	—
10 2	Horn Reefs, ...	12 0	—	—
0 47	Nyminde Gab, ...	2 45	2½	—
3 58	Skagen, or The Skaw, ..	5 56	1	—
1 36	Thorsminde, ...	3 34	2	—
	DENMARK.			
0 22	Husum, ...	2 20	11	—
10 32	Lister Deep—Fairway Buoy,	0 30	5½	—
0 2	Lister Roads, ...	2 0	6½	—
11 52	Wyk Föhr Island, ...	1 50	8	—
	GERMANY.			
8 11	Altona, ...	5 9	8	—
11 42	Bremerhaven, ...	1 40	11	—
11 10	Cuxhaven, ...	1 8	10	—
11 57	Elder Tonning, ...	1 55	11½	—
10 2	Elbe Entrance, ...	12 0	11	—
10 17	,, Outer Light Vessel, No. 1,	0 15	9½	—
8 2	Ems, River, Outer Buoy,	10 0	10–8	—
10 36	Emden, ...	0 34	9	—
9 57	Frederiken Siel, ...	11 55	4	—
1 11	Glückstadt, ...	3 9	11½	—
7 2	Haarlem, ...	9 0	—	—
3 31	Hamburg, River Elbe, ..	5 29	7½	—
9 35	Helgoland, ...	11 38	9½	—
10 32	Heppens, ...	0 30	12½	—
10 2	Hooksiel, ...	0 0	11	—
9 17	Norderney, ...	11 15	7½	—
10 22	Weser Light Vessel, ..	0 20	10	—
9 32	,, Entrance, ...	11 30	14	—
9 37	Wangeroog, ...	11 35	10	—
	NETHERLANDS.			
7 32	Ameland Gat, ...	9 30	6½	—
1 2	Amsterdam, ...	3 0	10	—
0 2	Brouwershaven, ...	2 0	10	—
11 2	,, Gat, ...	1 0	9½	—
1 17	Baths, ...	3 15	14	—
1 2	Brielle, ...	3 0	5	—
0 2	Goeree Gat, ...	2 0	7½	—
5 29	Nieuwediep, ...	7 27	4	—
1 47	Rotterdam, ...	3 45	7	—
8 2	Rottum, ...	10 0	7½	—
6 42	Terschelling, west, ...	8 40	6	—
4 32	Texal, outside shoals, ..	6 30	4	3½
11 2	Veere-Gat, ...	1 0	15	11
1 32	Willemstad, ...	3 30	10	—
10 42	West Kappelle, ...	0 40	14½	11
0 2	Zierikzee, ...	2 0	10½	9
	BELGIUM.			
2 27	Antwerp, ...	4 25	15	—
10 17	Blankenberghe, ...	0 15	13	10
10 56	Flushing, ...	0 54	15	11
10 20	Nieuport, ...	0 18	16	13
10 27	Ostend, ...	0 25	19	15
10 52	Sluische-gat, ...	0 50	14½	10
	FRANCE.			
2 16	Abervrach, ...	4 14	22	16
3 53	Brehat, ...	5 51	31	23½
4 52	Bordeaux, ...	6 50	14	12½
6 53	Barfleur, ...	8 51	17	13½
1 47	Bayonne Bar, ...	3 45	12	10½
9 27	Boulogne, ...	11 25	25	19½
1 49	Brest, ...	3 47	19	13½
9 51	Calais, ...	11 49	19½	15½
9 29	Cape Grisnez, ...	11 27	21½	16½
9 7	Cayeux, ...	11 5	27½	21
6 59	Caen, ...	10 57	—	—
4 11	Chausey Island, ...	6 9	35	26
2 2	Charante River, entrance,	4 0	20	—
5 51	Cherbourg, ...	7 49	17	12½
4 42	Dielette Harbour, ...	6 40	27	20½
7 41	Dives, ...	9 39	21	16
9 8	Dieppe.	11 6	27	20½

Add to L. Br.	Foreign Ports and Places. Europe.	H. W. ○ & ● at Pl.	Rise. Sp.	Rise. Np.
Gives h. m.	Local Time.	h. m.	Ft.	Ft.
9 57	Dunkerque, ...	11 55	16½	13½
8 46	Fecamp, ...	10 44	23½	18
1 14	Glenan Iles, ...	8 12	13	10
10 2	Gravelines, ...	12 0	19	15
4 15	Granville, ...	6 13	37	27½
5 8	Goury, ...	7 6	22	17½
7 31	Honfleur, ...	9 29	23½	18
7 20	Havre, ...	9 13	22	18
	High water is nearly stationary for 2 hours and falls about 16 inches next 8 hours;			
4 11	Iles de Chausey, ...	6 9	35	26
6 44	La Hogue, ...	8 42	18½	14½
1 13	L'Orient, Port Louis; ..	3 11	13	9½
1 42	Loire River Entrance. ..	3 40	15½	11
2 55	Morlaix Road, ...	4 53	24	18
4 8	Minquiers Rocks, ...	6 6	35	26
7 38	Merville, ...	9 36	21	17½
2 2	Nantes, ...	4 0	—	—
1 44	Navallo Port, ...	3 42	13	9½
7 40	Oystreham, ...	9 38	21	16
4 2	Paimpol, ...	6 0	31	23½
1 18	Penmark Rocks, ...	3 16	—	—
3 17	Poloumanach, ...	5 15	24½	18½
2 8	Rochefort, ...	4 6	17	13
1 33	Rochelle, ...	3 31	17	13
0 30	Rouen, ...	2 23	—	—
2 48	Roscoff, ...	4 46	23	17½
1 40	Royan, ...	3 38	13½	10
4 22	St. Germain, ...	6 20	34	20
4 7	St. Malo, ...	6 5	35	26
8 48	St. Valery-en-Caux, ...	10 46	27	21½
1 42	St. Nazaire, ...	3 40	15½	11
9 48	St. Valery-sur-Somme, ..	11 46	27	21½
1 14	Sein, Ile de, ...	3 12	17½	13
1 21	Socoa, ...	3 19	12½	8½
3 34	Trequier, ...	5 32	25	18½
1 17	Barquero (entrance), ...	3 15	10½	—
1 34	Cadiz, ...	3 32	19½	13½
	SPAIN AND PORTUGAL.			
1 2	Bilbao Bar, ...	3 0	13	—
1 22	Bilbao Town, ...	3 20	9	—
2 32	Biscay Coast, ...	4 30	—	—
1 17	Barquero (entrance), ...	3 15	10½	—
1 34	Cadiz, ...	3 32	19½	13½
1 2	Cape Finisterre.	3 0	—	—
1 2	Corunna, ...	3 0	15	—
11 49	Gibraltar, new Mole, ..	1 47	4	2½
0 32	Lisbon Bar, ...	2 30	12	9
10 2	Malaga, ...	12 0	3	—
0 32	Oporto, ...	2 30	10	8
11 26	Roba, ...	1 24	12½	8
1 2	San Sebastian, ...	3 0	12	9
1 32	Santander, ...	3 30	15	12
1 2	Santona, ...	3 0	12½	10½
0 32	Setubal, ...	2 30	11½	7
11 29	Salmedina Rocks, ...	1 27	12½	8
11 48	Tarifa, ...	1 46	6	3½
1 2	Vivero, ...	3 0	15	—
1 2	Vigo, ...	3 0	12	—
	MEDITERRANEAN.			
0 8	Ceuta, ...	2 6	33½	24½
8 32	Port Malamocco, Adriatic, ..	10 30	4	2½
7 37	Trieste, ...	9 35	3½	—
8 2	Yafa, Syria, ...	10 0	1½	—

FOREIGN PORTS IN ALPHABETICAL ORDER.

3 27	Adelaide, South Australia, ..	5 25	8½	6½
7 32	Aden Bay, Arabia, ...	9 30	7	4½
7 47	Akyab, Bay of Bengal, ...	9 45	9	6
2 2	Algoa Bay, South Africa, ..	4 0	4	5
10 2	Amoy, China, ...	Noon	18½	14½
6 36	Anne, St., Bay, Cape Breton, ..	8 34	6	4½
0 2	Anticosti, W. point G. St. Law.,	2 0	6	4
2 28	Bahia, Brazil, ...	4 26	8	—
8 2	Balasore, Bay of Bengal, ..	10 0	15	1
4 35	Baltimore, U.S., ...	6 33	1½	—
4 30	Barnstaple, U.S., ...	6 28	10½	7½
1 17	Bathurst, Gulf St. Lawrence, ..	3 15	7	4
4 2	Belgrano, Port, La Plata, ..	6 0	12	10
9 31	Blackrock, Bay of Fundy, ..	11 29	36	31
9 42	Bombay, India, ...	11 40	12½	6 10
9 29	Boston Naval Yard, U.S., ..	11 27	11½	10
1 2	Brandy Pots, St. Lawrence, ..	3 0	17	10
6 47	Burin Harbour, Newfoundland,	8 45	6½	4½
0 32	Calcutta, India.	2 30	12	5 —
3 49	Callao Bay, Peru, ...	5 47	4	—
1 2	Cameleon Harbour, B. Columbia,	3 0	16	11½
8 2	Canton River, entrance, China,	10 0	8	—
9 32	Cape Cod, U.S., ...	11 30	13	—
10 2	Cape Chatte, U.S., ...	12 0	13	8
2 42	Cape Horn, S. America, ...	4 40	9	—
2 2	Campbell town, St. Lawrence, ..	4 0	10	7
5 17	Carouge River, ,, ,, ..	7 15	16	11
1 2	Carribean Islands, ...	3 0	1½	1
5 28	Charlestown, U.S., ...	7 26	6	5
	Depth Bar, Low Water,		11	
10 47	Chittagong, Bay of Bengal, ..	0 45	15	10
2 27	Condres Island, R. St. Lawrence,	4 25	17	10
7 10	Coquimbo, Chili.	9 8	5	—

TIDAL CONSTANTS FOR THE PRINCIPAL FOREIGN PORTS.

Add to L. Br.	Foreign Ports and Places in Alphabetical order.	H. W. ○ & ● at Pl.	Rise. Sp.	Rise. Np.
Gives h. m.	Local Time.	h. m.	Ft.	Ft.
6 29	Cape Sable, Bay of Fundy, ..	8 27	8½	6½
9 17	Cape York, Australia, ...	11 15	10	7
6 2	Delaware River, entrance, U.S.,	8 0	4½	3½
2 22	Demerara River, Guayana, ..	4 20	9	4
4 15	Granville, ...		6 13	37
5 8	Goury, ...		7 6	22
7 31	Honfleur, ...		9 29	23½
7 20	Havre, ...		9 13	22
7 6	Depth Bar River, Low Water,		10	
1 2	Egg Island Light, U.S.	9 4	7	5½
9 47	Espirito Bay, Brazil, ...	3 0	4	—
2 2	Fayal, Azore, ...	11 45	4	—
9 18	Fernando Po, Bight of Biafra, ..	4 0	7	—
11 32	Fish Head, Bay of Fundy, ..	11 16	22½	18½
4 24	Forward Harbour, B. Columbia,	3 0	16	11½
10 50	Frederickshaab Greenland, ..	6 22	9	5
	Funchal Bay, Madeira, ...	0 48	7	—
0 27	Galveston Bar—Depth, L. Water,		12	
0 47	Gospáth Point, Hindoostan, ..	2 25	18	13½
0 42	Green Island, River St. Lawrence	2 45	16	9
5 51	Grenada, St. George, ...	2 40	1½	—
9 32	Halifax, Nova Scotia, ...	7 49	6	5
11 2	Hanover Bay, Australia, ..	11 30	38	24
6 16	Havana, Cuba, ...	8 14	3	—
6 17	Hobarton, Tasmania, ...	8 15	4½	3½
11 2	Holmes Bay. North America, ..	1 0	13	10
8 17	Hong Kong, China, ...	10 15	4½	—
11 2	Ichabo Island, W.C. Africa, ..	1 0	6	4
4 2	Lagos Bar, Africa, ...	6 0	3	—
5 8	Maranham, Brazil, ...	7 9	16½	10½
4 40	Quebec, Canada, ...	6 38	18	13
2 30	Richmond, U.S., ...	4 28	3½	2½
1 2	Rio de Janeiro, Brazil, ...	3 0	4	3
5 32	Sable Island, N. Scotia, ...	7 30	4	—
2 18	Saguenay, Chicoutimi, G. St. Law.,	4 11	12	8
0 47	,, Tadousac, ,, ...	2 45	17	10
9 23	St. John, Bay of Fundy, ...	11 21	27	23
5 32	St. John's, Newfoundland, ..	7 30	6	4

Add to L. Br.	Foreign Ports and Places in Alphabetical order.	H. W. ○ & ● at Pl.	Rise. Sp.	Rise. Np.
Gives h. m.	Local Time.	h. m.	Ft.	Ft.
3 2	Min. River, Losing I. China, ..	0 0	6½	—
7 32	Moreton Bay, Queensland, ..	9 30	4–7	—
10 26	Nantucket, U.S., ...	0 24	3–4	3
3 2	Negapatam, Bengal, ...	5 0	3	—
7 52	Nelson, N. Zealand, ...	9 50	14	10
6 15	New York, U.S., ...	8 13	6½	4½
	Depth L.W., ...	—	21	—
0 52	Otago Har., N. Zealand, ...	2 50	7	5
	Pensacola, U.S., depth bar L.W.,	—	22½	—
10 2	Penang, Malacca Strait, ...	Noon	9	7½
2 47	Pernambuco, S. America, ...	4 45	8-6	5
11 20	Philadelphia, U.S., ...	1 18	6⅔	5½
7 32	Plymouth, New, N. Zealand, ..	9 30	12	9
9 23	Portland, U.S., ...	11 25	10	8⅔
2 32	Port Natal, Africa, ...	4 30	6	—
7 44	Port Philip, Geelong Australia, ..	9 42	7	5½
9 2	Port Royal, Jamaica, ...	11 0	1	—
	Depth bar, S chanl., L.W., ..	—	10½	—
4 40	Quebec, Canada, ...	6 38	18	13
2 30	Richmond, U.S., ...	4 28	3½	2½
1 2	Rio de Janeiro, Brazil, ...	3 0	4	3
5 32	Sable Island, N. Scotia, ...	7 30	4	—
2 18	Saguenay, Chicoutimi, G. St. Law.,	4 11	12	8
0 47	,, Tadousac, ,, ...	2 45	17	10
9 23	St. John, Bay of Fundy, ...	11 21	27	23
5 32	St. John's, Newfoundland, ..	7 30	6	4

Add to L. Br.	Foreign Ports and Places in Alphabetical order.	H. W. ○ & ● at Pl.	Rise. Sp.	Rise. Np.
Gives h. m.	Local Time.	h. m.	Ft.	Ft.
9 15	Sands Point, U.S., ...	11 13	9	7½
5 31	Sandy Hook, U.S., ...	7 29	5½	5
3 22	Sarawac, Borneo, ...	5 20	1518	9
6 15	Savannah City, U.S., ...	8 13	7½	6½
6 44	Senegal Bar, Africa, W.C., ..	8 42	6	—
11 42	Seven Islands Bay, Gulf St. Law.,	1 40	9	—
11 32	Shanghai, China, ...	1 30	10	7
6 8	Sheet Harbour, Nova Scotia, ..	8 6	6½	4½
5 57	Sierra Leone, Africa, ...	7 55	8	—
0 46	Simon's Bay, ...	2 44	5½	3½
5 56	Ship Harbour, N. Scotia, ...	7 54	6½	4½
7 47	Singapore, Malacca Strait, ..	9 45	10	7½
6 40	Sydney, Australia, ...	8 38	4½	4
0 42	Table Bay, Africa, ...	2 40	5	3½
9 32	Three Rivers, St. Lawrence, ..	11 30	1	—
2 32	Trinidad, S. America, ...	4 30	4	3
7 34	Valparaiso, ,, ,, ...	9 32	5	—
6 2	Whitehaven, U.S., ...	8 0	6½	4½
7 8	Wilmington, U.S., ...	9 6	3	2½
	Depth Bar, L.W., ...	—	8	—
8 11	Yarmouth, Bay of Fundy, ..	10 9	16	13
6 17	Yio Road, Peru, ...	8 15	6	—
4 2	Yokohama, Japan, ...	6 0	6½	4½
9 22	Young River, Chinhae, China, ..	11 20	12½	—
11 2	,, Ningpo fu, ,, ..	1 0	9	—
7 7	Yu-lin-Kan Bay, ...	9 5	2½	—

DISTANCES TO PRINCIPAL FOREIGN PORTS.

Where two sets of figures occur opposite any one Port, the upper refer to distance *via* Suez Canal.

In Nautical Miles from	London.	Liverpool.	Tyne.	Cardiff.	Glasgow.
Acyab,	7,945	7,375	8,235	7,795	7,995
..	11,444	11,374	11,734	11,295	11,494
Adelaide,	8,745	8,675	9,035	8,595	8,795
..	11,530	11,461	11,820	11,380	11,581
Aden,	4,695	4,625	4,985	4,550	4,745
..	9,955	9,885	10,245	9,805	10,005
Alexandria,	3,095	3,025	3,387	2,943	3,145
Algiers,	1,598	1,528	1,888	1,448	1,648
Alicante,	1,628	1,558	1,923	1,471	1,678
Almeria,	1,460	1,390	1,753	1,310	1,510
Amherst,	8,000	7,930	8,295	7,855	8,050
	11,520	11,450	11,810	11,370	11,570
Amoy,	10,020	9,950	10,312	9,870	10,070
	14,180	14,110	14,470	14,030	14,230
Arica,	9,730	9,660	10,023	9,580	9,780
Ascension,	3,903	3,833	4,196	3,753	3,953
Athens,	2,706	2,636	2,996	2,556	2,756
Auckland,	12,130	12,050	12,410	11,970	12,170
Azores,	1,460	1,350	1,750	1,270	1,470
Barbadoes,	3,795	3,725	4,095	3,645	3,845
	8,334	8,265	8,624	8,184	8,385
Batavia,	11,270	11,200	11,560	11,120	11,320
Barcelona,	1,866	1,796	2,158	1,716	1,916
Bermuda,	3,048	2,978	3,338	2,848	3,098
Bombay,	6,330	6,260	6,620	6,180	6,380
	10,595	10,525	10,885	10,445	10,645
Bonny,	4,170	4,100	4,460	4,020	4,220
Boston,	3,025	2,803	3,815	2,725	2,733
Bordeaux,	660	590	950	570	710
Buenos Ayres,	6,236	6,210	6,570	6,160	6,380
	6,455	6,385	6,745	6,305	6,505
Bushire,	11,500	11,430	11,790	11,350	11,550
	7,950	7,880	8,340	7,800	8,000
Calcutta,	11,450	11,380	11,740	11,300	11,500
Callao,	9,970	9,900	10,260	9,820	10,020
C. of Good Hope,	6,065	5,995	6,355	5,940	6,115
Cape Horn,	7,395	7,325	7,685	7,250	7,445
Carthagena,	1,560	1,490	1,850	1,410	1,610

In Nautical Miles from	London.	Liverpool.	Tyne.	Cardiff.	Glasgow.
Cadiz,	1,243	1,178	1,538	1,099	1,298
Christiania,	656	1,000	520	1,069	935
Cochin,	6,532	6,462	6,922	6,370	6,582
	10,015	9,945	10,305	9,860	10,065
Constantinople,	3,085	3,015	3,375	2,936	3,135
Copenhagen,	715	1,066	586	1,126	1,001
Cronstadt,	1,333	1,734	1,254	1,794	1,669
Danube,	3,340	3,270	3,625	3,190	3,390
Demerara,	4,030	3,960	4,320	3,880	4,080
Elsinore,	692	1,043	563	1,103	978
Galle,	6,810	6,740	7,100	6,660	6,860
	10,340	10,268	10,630	10,190	10,388
Genoa,	2,215	2,145	2,505	2,065	2,265
Gibraltar,	1,330	1,260	1,620	1,150	1,380
Halifax, N.S.,	2,680	2,453	2,970	2,530	2,388
Havana,	4,187	3,980	4,477	4,037	4,100
Hong Kong,	9,775	9,705	10,065	9,625	9,825
	12,910	12,840	13,200	12,760	12,960
Honolulu,	13,326	13,256	13,616

CORRESPONDING READINGS OF FAHRENHEIT'S, REAMUR'S, AND THE CENTIGRADE THERMOMETRICAL SCALES.

Fahr.	Ream.	Centigr.	Fahr.	Rea.	Cent.	Fahr.	Rea.	Cent.
—30	—27·5	—34·4	34	0·8	1·1	116	37·3	46·6
—28	—26·6	—33·3	35	1·3	1·6	118	38·2	47·7
—26	—25·7	—32·2	36	1·7	2·2	120	39·1	48·8
—24	—24·8	—31·1	37	2·2	2·7	122	40·0	50·0
—22	—24·0	—30·0	38	2·6	3·3	124	40·8	51·1
—20	—23·1	—28·8	39	3·1	3·8	126	41·7	52·2
—18	—22·2	—27·7	40	3·5	4·4	128	42·6	53·3
—16	—21·3	—26·6	41	4·0	5·0	130	43·5	54·4
—14	—20·4	—25·5	42	4·4	5·5	132	44·4	55·5
—12	—19·5	—24·4	43	4·8	6·1	134	45·3	56·6
—10	—18·6	—23·3	44	5·3	6·6	136	46·2	57·7
— 8	—17·7	—22·2	45	5·7	7·2	138	47·1	58·8
— 6	—16·8	—21·1	46	6·2	7·7	140	48·0	60·0
— 4	—16·0	—20·0	47	6·6	8·3	142	48·8	61·1
— 2	—15·1	—18·8	48	7·1	8·8	144	49·7	62·2
— 0	—14·2	—17·7	49	7·5	9·4	146	50·6	63·3
1	—13·7	—17·2	50	8·0	10·0	148	51·5	64·4
2	—13·3	—16·6	52	8·8	11·1	150	52·4	65·5
3	—12·8	—16·1	54	9·7	12·2	152	53·3	66·6
4	—12·4	—15·5	56	10.6	13·3	154	54·2	67·7
5	—12·0	—15·0	58	11·5	14·4	156	55·1	68·8
6	—11·5	—14·4	60	12·4	15·5	158	56·0	70·0
7	—11·1	—13·8	62	13·3	16·6	160	56·8	71·1
8	—10·6	—13·3	64	14·2	17·7	162	57·7	72·2
9	—10·2	—12·7	66	15·1	18·8	164	58·6	73·3
10	— 9·7	—12·2	68	16·0	20·0	166	59·5	74·4
11	— 9·3	—11·6	70	16·8	21·1	168	60·4	75·5
12	— 8·8	—11·1	72	17·7	22·2	170	61·3	76·6
13	— 8·4	—10·5	74	18·6	23·3	172	62·2	77·7
14	— 8·0	—10·0	76	19·5	24·4	174	63·1	78·8
15	— 7·5	— 9·5	78	20·4	25·5	176	64·0	80·0
16	— 7·1	— 8·8	80	21·3	26·6	178	64·8	81·1
17	— 6·6	— 8·3	82	22·2	27·7	180	65·7	82·2
18	— 6·2	— 7·7	84	23·1	28·8	182	66·6	83·3
19	— 5·7	— 7·2	86	24·0	30·0	184	67·5	84·4
20	— 5·3	— 6·6	88	24·8	31·1	186	68·4	85·5
21	— 4·8	— 6·1	90	25·7	32·2	188	69·3	86·6
22	— 4·4	— 5·5	92	26·6	33·3	190	70·2	87·7
23	— 4·0	— 5·0	94	27·5	34·4	192	71·1	88·8
24	— 3·5	— 4·4	96	28·4	35·5	194	72·0	90·0
25	— 3·1	— 3·8	98	29·3	36·6	196	72·8	91·1
26	— 2·6	— 3·3	100	30·2	37·7	198	73·7	92·2
27	— 2·2	— 2·7	102	31·1	38·8	200	74·6	93·3
28	— 1·7	— 2·2	104	32·0	40·0	202	75·5	94·4
29	— 1·3	— 1·6	106	32·8	41·1	204	76·4	95·5
30	— 0·8	— 1·1	108	33·7	42·2	206	77·3	96·6
31	— 0·4	— 0·5	110	34·6	43·3	208	78·2	97·7
32	0·0	0·0	112	35·5	44·4	210	79·1	98·8
33	0·4	0·5	114	36·4	45·5	212	80·0	100·0

TABLE OF VELOCITY AND PRESSURE OF WIND.

Velocity per Hour. Miles.	Pressure Per sq. ft. Lbs.	Designation of Wind.	Velocity per Hour. Miles.	Pressure Per sq. ft. Lbs.	Designation of Wind.
1	0·01	Light.	49	12·00	
2	0·02		50	12·50	
			51	13·00	
3	0·04	Gentle.	52	13·52	
4	0·08		53	14·04	
5	0·12		54	14·58	
			55	15·12	
6	0·18		56	15·68	Gale.
7	0·24		57	16·24	
8	0·32	Fresh.	58	16·82	
9	0·40		59	17.40	
10	0·50				
12	0·72		60	18·00	
13	0·84		62	19·22	
14	0·98		64	20·48	
			66	21·78	
15	1·12		68	23·12	
16	1·28		69	23·80	
17	1·44		70	24·50	
19	1·80	Brisk.	71	25·20	
20	2·00		72	25·92	Storm.
22	2·42		73	26·64	
24	2·88		74	27·38	
25	3·12		75	28·12	
26	3·38		76	28·88	
28	3·92		77	29·64	
29	4·20		78	30·42	
			79	31·20	
30	4·50				
31	4·80		80	32·00	
32	5·12		82	33·62	
34	5·78		84	35·28	
35	6·12	High.	86	36·98	
36	6·48		88	38·72	
37	6·84		90	40·50	
38	7·22		92	42·32	
			94	44·18	Hurricane.
40	8·00		96	46·08	
41	8·40		98	48·02	
42	8·82		100	50·00	
44	9·68	Gale.	110	60·50	
45	10·12		120	72·00	
46	10·58		130	84·50	
47	11·04		140	98·00	
48	11·52		150	12·50	

DIP OF SEA HORIZON.

Height of Eye.	Dip of Horizon
Ft.	′ ″
1	0 59
2	1 24
3	1 42
4	1 58
5	2 12
6	2 25
7	2 36
8	2 47
9	2 57
10	3 7
11	3 16
12	3 25
13	3 33
14	3 41
15	3 49
16	3 56
17	4 4
18	4 11
19	4 17
20	4 24
21	4 31
22	4 37
23	4 43
24	4 49
25	4 55
26	5 1
27	5 7
28	5 13
29	5 18
30	5 24
31	5 29
32	5 34
33	5 39
34	5 44
35	5 49
38	6 4
40	6 10
45	6 50
50	7 0
55	7 20
60	7 40
65	8 0
70	8 10
75	8 30
80	8 50
85	9 0
90	9 20
100	9 50

Parallax in Altitude of Sun.

☉ Alt.	☉ Dx.
°	″
0	9
3	9
6	9
9	8
12	8
15	8
18	8
21	8
24	8
27	8
30	7
33	7
36	7
39	7
42	6
45	6
48	6
51	5
54	5
57	5
60	4
63	4
66	3
69	3
72	3
75	2
78	2
81	1
84	1
87	0
90	0

USEFUL HINTS ON CHRONOMETERS, THEIR PRESERVATION, &c.

Chronometers should be handled as little as possible on ship-board, and they should *always* be kept in the outside cases, screwed down amidships, in some secure place, and free from any current of air.

The outside case should always be kept closed, except when taking time and winding. The reason is obvious—a sudden change of temperature and exposure to the sea-air is injurious; and a sudden change of temperature will cause a Chronometer to sweat, and it will become rusty. As an instance—if you expose a Chronometer by leaving the lids of the case up through the night, the Chronometer may receive a temperature of 40°. In the morning the sun may shine, and the day prove very warm, say a temperature of 60°. This sudden change of temperature will cause it to sweat, *and it is liable to become more or less rusty, and it then cannot maintain a permanent rate.* Hence, will be seen the necessity of protecting, in a proper manner, (with the outside case and every care), this valuable instrument, rendered so necessary in navigation. *The outside cases are lined and packed for the express purpose of keeping the Chronometer free from exposure to the sea air and the sudden changes of the atmosphere, and they should never be removed.*

It has been a subject of extreme vexation to most Chronometer makers, the course of late pursued by many ship-masters, in dispensing with the outside case. Many Chronometers of the best makers have failed, through rust produced by exposing them.

Be careful, when carrying the Chronometer to and from the ship, to secure the gimbol by the stay, keep it steady, and by all means to avoid quick circular motions.

When on board, free the stay: be particular to fasten it back to free the gimbol. Ship time for deck observations is recommended to be obtained by a watch previously compared with the Chronometer. In winding, turn it over gently, put the valve back and apply the winder, turn easy till wound up, avoiding sudden jerks. Ship-masters, by attending to the above suggestions, will generally receive a greater amount of satisfaction in the use of the Chronometer.

In the pages we have supplied for taking the daily rate and comparison of two or three Chronometers, we have also added Columns to enable the difference between each to be recorded; by regular observations, it will thus be easily found which Instrument is retaining its original rate, and can be most relied on for accuracy.

TABLE SHOWING THE EFFECT PRODUCED BY A CHANGE IN RATE OF A CHRONOMETER.

When a Chronometer gains on its rate, the computed Longitude is to the East of the true Longitude. When a Chronometer loses on its rate, the computed Longitude is to the West of the true Longitude. When, on making a well determined point of land, the Longitude by Chronometer does not agree with the actual position of the Ship, it will be convenient to refer to the following Table.

	SAILING EAST.	SAILING WEST.
	THE CHRONOMETER HAS	
The Land not made so soon as expected.	Gained Less or Lost More.	Gained More or Lost Less.
The Land made unexpectedly.	Gained More or Lost Less.	Gained Less or Lost More.
	THAN ALLOWED FOR.	

ABSTRACT OF VOYAGES DURING 1902.

Ship.	From	To	Left.	Arrived.	Days.	Remarks.

MEMORANDA.

MEMORANDA.

CHRONOMETER RATE JOURNAL,

JANUARY.

Sloan

Day of Month.	Chronometer No. 1462 — Fast of G. M. T. H.	M.	S.	10th.	Daily Rate. S.	10th.	Chronometer No. 2770 — Sloan fast of G. M. T. H.	M.	S.	10th	Daily Rate. S.	10th.	Daily Difference. S.	10th.	Chronometer No. ..... — ..... of G. M. T. H.	M.	S.	10th.	Daily Rate. S.	10th.	2nd Daily Difference. S.	10th.	Temperature.
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CHRONOMETER RATE JOURNAL,

FEBRUARY.

Day of Month.	Chronometer No. ..... — ..... of G. M. T. H.	M.	S.	10th.	Daily Rate. S.	10th.	Chronometer No. ..... — ..... of G. M. T. H.	M.	S.	10th.	Daily Rate. S.	10th.	Daily Difference. S.	10th.	Chronometer No. ..... — ..... of G. M. T. H.	M.	S.	10th.	Daily Rate. S.	10th.	2nd Daily Difference. S.	10th.	Temperature.
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CHRONOMETER RATE JOURNAL, ...

MARCH.

Day of Month.	Chronometer No.....						Chronometer No.....								Chronometer No.....								Temperature.
	.....of G. M. T.				Daily Rate.		.....of G. M. T.				Daily Rate.		Daily Difference		.....of G. M. T.				Daily Rate.		2nd Daily Difference.		
	H.	M.	S.	10th.	S.	10th.	H.	M.	S.	10th	S.	10th.	S.	10th.	H.	M.	S.	10th.	S.	10th.	S.	10th.	
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CHRONOMETER RATE JOURNAL, ...

APRIL.

Day of Month.	Chronometer No.....						Chronometer No.....								Chronometer No.....								Temperature.
	.....of G. M. T.				Daily Rate.		.....of G. M. T.				Daily Rate.		Daily Difference.		.....of G. M. T.				Daily Rate.		2nd Daily Difference.		
	H.	M.	S.	10th.	S.	10th.	H.	M.	S.	10th.	S.	10th.	S.	10th.	H.	M.	S.	10th.	S.	10th.	S.	10th.	
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CHRONOMETER RATE JOURNAL,

MAY.

Day of Month.	Chronometer No. ... of G. M. T. H.	M.	S.	10th.	Daily Rate. S.	10th.	Chronometer No. ... of G. M. T. H.	M.	S.	10th	Daily Rate. S.	10th.	Daily Difference. S.	10th.	Chronometer No. ... of G. M. T. H.	M.	S.	10th.	Daily Rate. S.	10th.	2nd Daily Difference. S.	10th.	Temperature.
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CHRONOMETER RATE JOURNAL,

JUNE.

Day of Month.	Chronometer No. 1462 Hart ... of G. M. T. H.	M.	S.	10th.	Daily Rate. S.	10th.	Chronometer No. 2740 ... of G. M. T. H.	M.	S.	10th	Daily Rate. S.	10th.	Daily Difference. S.	10th.	Chronometer No. ... of G. M. T. H.	M.	S.	10th.	Daily Rate. S.	10th.	2nd Daily Difference. S.	10th.	Temperature.
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CHRONOMETER RATE JOURNAL,

JULY.

Day of Month.	Chronometer No..... ... .of G. M. T.				Daily Rate.		Chronometer No..... .....of G. M. T.				Daily Rate.		Daily Difference.		Chronometer No..... .....of G. M. T.				Daily Rate.		2nd Daily Difference.		Temperature.
	H.	M.	S.	10th.	S.	10th.	H.	M.	S.	10th	S.	10th.	S.	10th.	H.	M.	S.	10th.	S.	10th.	S.	10th.	
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CHRONOMETER RATE JOURNAL,

AUGUST.

Day of Month.	Chronometer No..... ... .of G. M. T.				Daily Rate.		Chronometer No..... .....of G. M. T.				Daily Rate.		Daily Difference.		Chronometer No..... .....of G. M. T.				Daily Rate.		2nd Daily Difference.		Temperature.
	H.	M.	S.	10th.	S.	10th.	H.	M.	S.	10th	S.	10th.	S.	10th.	H.	M.	S.	10th.	S.	10th.	S.	10th.	
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CHRONOMETER RATE JOURNAL, ...

SEPTEMBER.

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	.....of G. M. T.				Daily Rate.		.....of G. M. T.				Daily Rate.		Daily Difference.		.....of G. M. T.				Daily Rate.		2nd Daily Difference.		
	H.	M.	S.	10th.	S.	10th.	H.	M.	S.	10th	S	10th	S.	10th.	H.	M.	S.	10th.	S.	10th	S.	10th.	
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CHRONOMETER RATE JOURNAL, ...

OCTOBER.

Day of Month.	Chronometer No.....						Chronometer No.....								Chronometer No.....								Temperature.
	.....of G. M. T.				Daily Rate.		.....of G. M. T.				Daily Rate.		Daily Difference.		.....of G. M. T.				Daily Rate.		2nd Daily Difference.		
	H.	M.	S.	10th.	S.	10th.	H.	M.	S.	10th	S.	10th.	S.	10th.	H.	M.	S.	10th.	S.	10th.	S.	10th.	
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CHRONOMETER RATE JOURNAL,.....

NOVEMBER.

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	.....of G. M. T.				Daily Rate.		.....of G. M. T.				Daily Rate.		Daily Difference.		.....of G. M. T.				Daily Rate.		2nd Daily Difference.		
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CHRONOMETER RATE JOURNAL,.....

DECEMBER.

Day of Month.	Chronometer No..... ...						Chronometer No.....								Chronometer No.....								Temperature.
	.....of G. M. T.				Daily Rate.		.....of G. M. T.				Daily Rate.		Daily Difference.		.....of G. M. T.				Daily Rate.		2nd Daily Difference.		
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24																							
25																							
26																							
27																							
28																							
29																							
30																							
31																							

Nautical Diary and Day's Work Book, ... from ..... to .....

1st Week.] WEDENSDAY, 1st JANUARY, 1902. [1-364.]

NAUT. EPHEMERIS,	Sun's Declination, *decreasing*,	Mean Noon, S23° 3′ 39″ / Appt. Noon 23 3 38	Var. 1 Hour, 11·68″	Equation of Time, *increasing*, Sub. from Mean Time 3m 25·03s. / Add to Appt. Time, 3 25·10	Var. 1 Hour, 1·191s.	Sun's Semi-Diam., 16′ 18″	Sidereal Time, 18h 40m 48·53s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

1st Week.] THURSDAY, 2nd JANUARY, 1902. [2-363.]

NAUT. EPHEMERIS,	Sun's Declination *decreasing*,	Mean Noon, S22° 58′ 45″ / Appt. Noon, 22 58 44	Var. 1 Hour, 12·83″	Equation of Time, *increasing*, Sub. from Mean Time, 3m 53·45s. / Add to Appt. Time, 3 53·53	Var. 1 Hour, 1·178s.	Sun's Semi-Diam., 16′ 18″	Sidereal Time, 18h 44m 45·09s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, ... from ..... to .....

2nd Week.] *Sunday*, 5TH JANUARY, 1902. *(2nd Sunday after Christmas).* [5-360.]

NAUT. EPHEMERIS, { Sun's Declination, *decreasing*, { Mean Noon, S22° 41′ 18″ / Appt. Noon 22 41 17 } Var. 1 Hour, 16·24″ | Equation of Time, *increasing*, Sub. from Mean Time 5m 16·70s. / Add to Appt. Time, 5 16·80 } Var. 1 Hour, 1·133s. | Sun's Semi-Diam., 16′ 18″ | Sidereal Time, 18h 56m 31·76s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

2nd Week.] MONDAY, 6TH JANUARY, 1902. *(Epiphany).* [6-359.]

NAUT. EPHEMERIS, { Sun's Declination *decreasing*, { Mean Noon, S22° 34′ 35″ / Appt. Noon, 22 34 34 } Var. 1 Hour, 17·36″ | Equation of Time, *increasing*, Sub. from Mean Time, 5m 43·67s. / Add to Appt. Time, 5 43·78 } Var. 1 Hour, 1·115s. | Sun's Semi-Diam., 16′ 18″ | Sidereal Time, 19h 0m 31·31s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, from to

3rd Week.] WEDNESDAY, 15TH JANUARY, 1902. [15-350.]

NAUT. EPHEMERIS,	Sun's Declination, *decreasing*.	Mean Noon, S21° 14′ 31″ / Appt. Noon, 21 14 26	Var. 1 Hour, 26·99″	Equation of Time, *increasing*, Sub. from Mean Time, 9m 23·03s. / Add to Appt. Time, 9 23·17	Var. 1 Hour, 0·961s.	Sun's Semi-Diam., 16′ 17″	Sidereal Time, 19h 36m 0·33s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

3rd Week.] THURSDAY, 16TH JANUARY, 1902 [16-349.]

NAUT. EPHEMERIS,	Sun's Declination, *decreasing*,	Mean Noon, S21° 3′ 31″ / Appt. Noon 21 3 26	Var. 1 Hour, 28·00″	Equation of Time, *increasing* Sub. from Mean Time, 9m 44·31s. / Add to Appt. Time, 9 44·45	Var. 1 Hour, 0·872s.	Sun's Semi-Diam., 16′ 17″	Sidereal Time, 19h 39m 56·38s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, from to

4th Week.] TUESDAY, 21ST JANUARY, 1902. [21-344.]

NAUT. EPHEMERIS, { Sun's Declination, *decreasing* { Mean Noon, S 20° 2′ 37″ / Appt. Noon, 20 2 31 } Var. 1 Hour, 32·85″ | Equation of Time, *increasing*, Sub. from Mean Time, 11m 19·82s. / Add to Appt. Time, 11 19·96 } Var. 1 Hour, 0·717s. | Sun's Semi-Diam., 16′ 17″ | Sidereal Time, 19h 59m 39·67s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

4th Week.] WEDNESDAY, 22ND JANUARY, 1902. [22-343.]

NAUT. EPHEMERIS, { Sun's Declination, *decreasing*, { Mean Noon, S 19° 49′ 18″ / Appt. Noon 19 49 12 } Var. 1 Hour, 33·73″ | Equation of Time, *increasing* Sub. from Mean Time, 11m 36·65s. / Add to Appt. Time, 11 36·79 } Var. 1 Hour, 0·685s. | Sun's Semi-Diam., 16′ 17″ | Sidereal Time, 20h 3m 36·22s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, S.S. Ship Disney from Hong Kong to Hilo

4th Week.] Port Hong Kong THURSDAY, 23RD JANUARY, 1902. [23-342.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 19° 35' 37" / Appt. Noon, 19 35 30 } Var. 1 Hour, 34·70″ | Equation of Time, increasing, Sub. from Mean Time, 11m 52·71s. Add to Appt. Time, 11 52·84 } Var. 1 Hour, 0·653s. | Sun's Semi-Diam., 16′ 17″ | Sidereal Time, 20h 7m 32·78s.

2nd Mate Anderson came on board Drunk fell and hurt Run head and was sent to the Hospital

Got under weigh at 7 am and proceeded to sea in Tow of three Launches

While passing through the Shipping Olaf Erakson fell overboard and went under the Towboat and did not come up again

Towboats and Pilot Left the Ship at 1-30 Pm. and we proceeded under all Sail

Lat 22°05' — Lon 114.19

1.15 PM. East Lema Head bore west 3 miles from Which I take my departure. 84. on log.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
„ by D. R.,
Distance by Obs.,
„ by D. R.,
„ by Log,
Current, North West
Var. used,
Dev. used,
Wind, Direct, North E by N
„ Force,
Sea, E N E Swell
Weather, Clear
Barom., 30.12
Thermom., Air,
„ Sea,
Hygrometer,

4th Week.] FRIDAY, 24TH JANUARY, 1902. 1 day at Sea [24-341.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 19° 21' 33" / Appt. Noon 19 21 26 } Var. 1 Hour, 35·60″ | Equation of Time, increasing, Sub. from Mean Time, 12m 7·99s Add to Appt. Time, 12 8·11 } Var. 1 Hour, 0·620s. | Sun's Semi-Diam., 16′ 16″ | Sidereal Time 20h 11m 29·33s

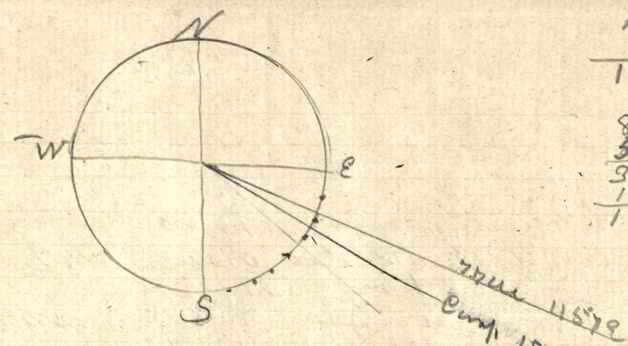
First part moderate Breeze all Sail Set Middle part Strong Breeze with high confused Sea.

3 Sam. Split the Crossjack

Day ends with a fresh Gale High Sea Strong W.S.W. Current

52 on Log.

Lat. by Obs., 19°42
Long. by Obs., 115 24
Course by Obs., S 21° E
„ by D. R., S 33° E
Distance by Obs., 152
„ by D. R.,
„ by Log, 156
Current, 24m WSW
Var. used, 3° E
Dev. used, 3° W
Wind, Direct, E N E
„ Force, 6
Sea, High
Weather, B. C. M
Barom., 30.10, 30.15, 30.
Thermom., Air,
„ Sea,
Hygrometer,



180
58
121

69 46
30 36
99 18
19 28
19,50

Lon 114.19 / 36 / 113-09

Lat 22,05 / 1 54 / 20,11

SSE. 124' = Lat 114.4 Lon 47.05

114.18. / 1 18 / 113 36

22,05 / 2 17 / 19 48

Lat 143-41.1

113.24 / 114 89 / 1 05 / 60 / 43.

22.05 / 19.42 / 2 23 / 60 / 143

7.30.am
True bearing N. 115° 07' E
Comp. " N. 121.00 E
Comp. Error 5°53' W
Var 5°0 E
Dev on SE 5°0 3' W

28

7.35 W, 18.4 by

11. 57.24 = 11.10
11. 57.51 = 11.16
4 22 5
11. 53.29 = 11.21
20.11
109.29
141 01
70.30
11.21
55=09

105-45 / 9 19 / 115 55 / 1A / 113-09

.02756-2
.02561
4.52705-
4.93375-
9.51393

19.21.07 / 11 5-7 / 19 33 19 0 / 11 33 22 / 7 39 44-

8.16. W. = 24.3 by

12.42.36. 20.31.
12.44 42. 20. 47.
4 22 8
12.40.20 = 20-55
20-11
109.29
150-35
75-17
20.55
54-22

105 / 10-08 / 115.08 / 1A / 115-24

.02756-2
.02561
4.40480
4 90886
9.36724

20.08.55 / 1 5-4 / 20-20-32 / 12 40 20 / 7 40 32

88 48
60 40
39 08
19 25
19.42
1 24
18.18

18° 21.26"
+ 4.42
18.24.08
+ 2 48
19-24 56
90.00 00
109.24 56

12.08.11
6.42
12,01.29
4 24
+ 11-36-55

5.5 S. E @ 7.45

4th Week.] SATURDAY, 25TH JANUARY, 1902. 2nd day at Sea [25-340.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 19° 7' 9" / Appt. Noon, 19 7 1 } Var. 1 Hour, 36·48″ | Equation of Time, increasing Sub. from Mean Time, 12m 22·48s. Add to Appt. Time, 12 22·60 } Var. 1 Hour, 0·587s. | Sun's Semi-Diam., 16′16″ | Sidereal Time, 20h 15m 25·89s.

This day comes in with a fresh Gale from N E by E and High Sea. Set Spritsail Double Reef and Ship Jumping for all she is worth Middle and Latter part the same. Have Got to Keep on this tack with this wind Not where are we going to Fetch up at, is what is worrying me now.

Lat. by Obs., 17° 38′
Long. by Obs., 116° 41
Course by Obs., S 30° E
„ by D. R., S 45° E
Distance by Obs., 143′
„ by D. R.,
„ by Log, 152′
Current, 36 S S W
Var. used, 1° E
Dev. used, 5° W
Wind, Direct, N E by E
„ Force, Gale
Sea, High Irregular Sea
Weather, B. C. M
Barom., 30.08 & 30.02
Thermom., Air,
„ Sea,
Hygrometer,

4th Day at Sea

5th Week.] Sunday, 26TH JANUARY, 1902 (Septuagesima Sunday). 3rd day at Sea [26-339.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 18° 52′ 23″ / Appt. Noon, 18 52 15 } Var. 1 Hour, 37·35″ | Equation of Time increasing, Sub. from Mean Time, 12m 36·18s. Add to Appt. Time, 12 36·30 } Var. 1 Hour, 0·554s. | Sun's Semi-Diam., 16′16″ | Sidereal Time, 20h 19m 22·44s.

This day comes in with Strong Breeze & Squally Weather Ship Labouring Middle and Latter part more Moderate 4 Am. Wore Ship to E.S.E. Strong Breeze a Little Less Sea Reefed Topgallant Sails Set.

Lat. by Obs., 17° 29
Long. by Obs., 116° 51
Course by Obs., E S E
„ by D. R., E N E
Distance by Obs.,
„ by D. R.,
„ by Log, 145′
Current, S S W 26′
Var. used,
Dev. used,
Wind, Direct, N E by E
„ Force, Gale
Sea, High
Weather, Hazy
Barom., 29.96, 29.95
Thermom., Air,
„ Sea,
Hygrometer,

3rd day at Sea
49. on Log

Nautical Diary and Day's Work Book "Dirigo" from Hong Kong to Hilo

5th Week.] MONDAY, 27TH JANUARY, 1902. 4th Day at Sea [27-336.

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 18° 37′ 17″ / Appt. Noon, 18 37 8 } Var. 1 Hour, 38·20″ | Equation of Time, increasing, Sub. from Mean Time 12m 49·69s. / Add to Appt. Time, 12 49·20 } Var. 1 Hour, 0·521s. | Sun's Semi-Diam., 16′ 16″ | Sidereal Time, 20h 23m 19·90s.

First part Strong breeze Light Sea
Middle part Moderate Sea
Wore ship to N by W and set
all Sail
Day end with light breeze
Hazy weather Sea quite smooth

Lat. by Obs., 16° 36
Long. by Obs., 117° 57
Course by Obs., S 54 E
" by D. R., S 66 E
Distance by Obs., 87'
" by D. R.,
" by Log, 117
Current, 30° S W
Var. used, 0°
Dev. used, 5° E
Wind, Direct, N.E. E N E
" Force,
Sea, light — moderate
Weather, Hazy
Barom., 29.95, 29.85
Thermom., Air,
" Sea,
Hygrometer,

EE on Log

5th Week.] TUESDAY, 28TH JANUARY, 1902. 5th Day at Sea [28-337.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 18° 21′ 50″ / Appt. Noon, 18 21 41 } Var. 1 Hour, 39·04″ | Equation of Time, increasing, Sub. from Mean Time 13m 1·20s. / Add to Appt. Time, 13 1·31 } Var. 1 Hour, 0·488s. | Sun's Semi-Diam., 16′ 16″ | Sidereal Time, 20h 27m 15·55s.

First part light airs from East
Which fell to a Calm
10 Pm light airs came from W.N.W.
With Mist & squalls
Latter part Wind from Nath to
N.N.W. light rain.

Lat. by Obs., 17.04
Long. by Obs., 118.57
Course by Obs.,
" by D. R.,
Distance by Obs.,
" by D. R.,
" by Log,
Current, 20. S W
Var. used,
Dev. used,
Wind, Direct,
" Force,
Sea,
Weather,
Barom.,
Thermom., Air,
" Sea,
Hygrometer,

34 on Log

7.47.W. 5-2. Log
12-17-07-19.32
4.23
12-12-38
18-40
16.24
108.35
144.39
72.19
18.40
32.39

12.17.36-18.38
4.23
12-13-13=19.44
16.24
108.35
144.46
72.23
19.47
32.36

105.45 2 14 107.59 3 107.54

.01804 .02324 4.48252 4.90034 5.42416
.01804 .02324 4.48054 4.90005 5.42228

19.31.51 12 43 20.04 34 12 12 34 7.51 54
18.52.26 12 43 20.05 08 12 13 13 7.51.54

Sun's Semi-Diam. N 128, 20' E
Compt. Bearing N 131 00 E
Error on Nath 2.40 W
Var. 30 E
Dev on N. 3° 10 W

18.27.08 + 5.12 16.32.20. 90 + 3 00 108.35.20

12.49.20 - 4.00 12.45.20 - 2 14 +12 43.02

89.50 54.40 35 10 18 32 16-38 14 24

N 6 W 4 N E 62 SW 20

N	S	E	W
6			
3+			4
34		5-1.6	
	14		14
40	14	51 6	18
14		14	
24		33.6	

16.38 40 17.18 — 117.54 34 118.30 13 118.02

17.04 27 1731 — 118.23 1 2 118.23 23 114.46

24 34 42

14°38. 24 17.04 — 117.52 33 118.31 46 3.16.W

7.44.38.= 28.08 4.23 10
7.40.16 = 28 18 17 04 108.24 53.47 74.53 24.19 46-34

105 13 14 14 119.29

.01956 .02279 4.35580 4.87490 5.27316
3.25.18 24 12 55 27 38 13 19 40 14 7 57 57

119.22. 4 Pm 4.6 34 34/8 4

16.21.41 + 5.12 18.26.53 90 + 3 00 108-29-53

13.07.31 - 4 00 12 57 31 - 2 18 12-55 13

14.26.53 84 3 108 24

Were Ships 5-PM. 56 on Log

8.02 W. 44. Lee

12, 31, 13. 22, 5-3

4 23 S

12 26 5-0 23-02

17.31

106.13

148-46

74.23

23.02

31.21

.02062

.02233

4.43008

4,89244

9,36567

20.09.36

13 6

24 22 42

12 24 60

7 33 42

W

55.. 37.3

N 10

62 27

12.32.26. 23.05-

4 23 S

12.28.03= 23 14

17.25

105 45

+3 4

108 51

14

118.05

108.13

148 52

74 24

23 14

31.12

.02038

.02233

4.42872

4.89173

9.36316

20.10.20

13 06

20 23 26

12 28 03

7.55 23

	N	W	S
NW. 20	14	14.	
NbW 60	38	10.7	
SW 25		17.7	17.7
	72	43.4	
	18		
	54		

17.11 118.10

54 43

1805 118.25

18.05.54

+ 5 12

18.11.06

Co + 2 12

108-13 18

13,12,62

4 02

13.04.62

2 cr

13.061

89 50.

3 42

3 5 24

14 11

17.13

17.11. 119.10

14 45 118 01

1 34 1-9

79

Lat Dep.

84 -73

N 39 W 121

101.42

84 73

7.33

18.43.

1

18.43

119.10

114.01

40

117.21

17,48,48

+ 5 12

17 54 50

Co. 2. 12

107.57.02

13.23.13

— 4 cr

13,19 13

— 2 cr

13-17-13

89.50

3 3 10

36.40

17 53

18.45

18

26

27

39

43

7, 31, W. 52, Log

11.53.24. 14.02.

4.24 7

11.48.02=14.08

16.00

107.57

140 06

70.03

14.08

55.54

.02178

.02147

4.53961

4.81804

9.44593

19.28.13

13 17

19.41.30

11 49 02

7 52 28

11.57.24. 14.49

424 7

11.53-00=14-56

16.24

107.57

141-99

70-99

14.56

55 43

.02287

.02147

4.52027

4.91712

9.48193

18.32.39

13 17

19.45 56

11 53 00

7.52 56

13

Nautical Diary and Day's Work Book, Diana from Hong Kong to Hilo

WEDNESDAY, 29TH JANUARY, 1902. 6. day at Sea [29-636.]

5th Week.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 18° 6' 3" / Appt. Noon, 18 5 54 } Var. 1 Hour, 39·86″ | Equation of Time, increasing / Sub. from Mean Time, 13m 12·52s. / Add to Appt. Time, 13 12·02 } Var. 1 Hour, 0·455s. | Sun's Semi-Diam., 16′16″ | Sidereal Time, 20h 31m 12·11s.

This day comes in with light NNE winds - Rain at times 4 Pm sighted Cape Bolinao 25. S.E.

Were Ship at 5 Pm

Middle part moderate breeze. With a SW current. and a choppy sea throwing the ship off it is impossible to make any thing to windward

Were Ship at 4 Am

Latter part moderate to light winds at Noon I find I have made 18. As our position is per miles North and 18. East of our position by dead reckoning at Noon yesterday after having Sailed 129 miles

I am puzzled what to do. We are 300. Miles South of where we started from

63 on Log.

Lat. by Obs., 17° 11

Long. by Obs., 119° 10

Course by Obs., N 71° E

„ by D. R.,

Distance by Obs., 18′

„ by D. R.,

„ by Log, 129

Current, 30 SWly S

Var. used,

Dev. used, uncertain

Wind, Direct, NNE

„ Force,

Sea, choppy

Weather,

Barom.,

Thermom., Air,

„ Sea,

Hygrometer,

THURSDAY, 30TH JANUARY, 1902. 7. day at sea [30-335.]

5th Week.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 17° 49′ 57″ / Appt. Noon, 17 49 48 } Var. 1 Hour, 40·67″ | Equation of Time increasing, / Sub. from Mean Time, 13m 23·04s. / Add to Appt. Time, 13 23·13 } Var. 1 Hour, 0·421s. | Sun's Semi-Diam., 16′16″ | Sidereal Time, 20h 35m 8·67s.

This day comes in with light breeze and a heavy NNE swell. Were ship to N and at 1 Pm - 3 Hour started Sailing in company

Middle and Latter Part of this day Moderate unsteady breeze. heavy Swell from Northward keeping us from making any kind of a Course

Weather Hazy

43 on Log

Lat. by Obs., 18° 45′

Long. by Obs., 118° 01

Course by Obs., N 38° W

„ by D. R., N 22° W

Distance by Obs., 121

„ by D. R.,

„ by Log, 110.

Current, 30. NSW

Var. used, — 00° 30′

Dev. used, 3° E

Wind, Direct, NE by E

„ Force,

Sea,

Weather,

Barom.,

Thermom., Air,

„ Sea,

Hygrometer,

Nautical Diary and Day's Work Book, Barrigee from Hong Kong to Hilo

5th Week.] FRIDAY, 31st JANUARY, 1902. 8th day at Sea [31-334.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 17° 33' 32" / Appt. Noon, 17 33 22 } Var. 1 Hour, 41·46″ | Equation of Time, increasing, Sub. from Mean Time, 13m 32·75s. Add to Appt. Time, 13 32·84 } Var. 1 Hour, 0·388s. | Sun's Semi-Diam., 16′ 15″ | Sidereal Time, 20h 30m 5·22s.

This day comm with light breeze from N E by E. Weather hazy with frequent mist showers

Middle part, wind light; thick mist.

This day ends with airs and calms. We have had 24 miles W S W drift during the day.

The sea does not go down with the wind. During the last six days we have made 112 miles to windward

40 on Log

Lat. by Obs.,	19° 56′
Long. by Obs.,	117° 14
Course by Obs.,	N 81° W
„ by D. R.,	N 15° W
Distance by Obs.,	88
„ by D. R.,	90
„ by Log,	70
Current,	W S W 20′
Var. used,	8
Dev. used,	8° E
Wind, Direct,	E N E to N E
„ Force,	light
Sea,	Easterly swell
Weather,	Hazy
Barom.,	29·85 29·95
Thermom., Air,	
„ Sea,	
Hygrometer,	

8.44.W. 40.307

13.11.05..28.38.
4 24 10

13.06.41 - 28.48
18 45
107 41
156.14
78.07
117.16 26.48
49 19

.022433
.02102
4.31370
4.87985
9.24090

20.42.41
13 27
20 56 06
13 06 41
7.49.27

13.11.30.28.44

18.45 118.01
18 56 117 14
45
1 11

Lat D.l.
71. 42.5 Course N 31° W. 88

17.33.22
+ 3 12
17 36 34
90 2 12
107.40.46

13.32.84
4 02
13.28 82
2 00
13.24 82

8950
32.15
3733
17 39
19.54

5th Week.] SATURDAY, 1st FEBRUARY, 1902. 9th Day at Sea. [32-333.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 17° 16′ 47″ / Appt. Noon, 17 16 38 } Var. 1 Hour, 42·23″ | Equation of Time, increasing, Sub. from Mean Time 13m 41·66s. Add to Appt. Time, 13 41·74 } Var. 1 Hour, 0·354s. | Sun's Semi-Diam., 16′ 15″ | Sidereal Time, 20h 43m 1·78s.

The first part of this day the ship did not have steerage way At 6 P.M. a light air came from North and we began to move along

Middle part gentle breeze; smooth sea

Latter part Moderate breeze fine weather

1 on Log

Lat. by Obs.,	19° 56′
Long. by Obs.,	118° 41
Course by Obs.,	East
„ by D. R.,	E ¾ N
Distance by Obs.,	80
„ by D. R.,	
„ by Log,	
Current,	15′
Var. used,	
Dev. used,	
Wind, Direct,	
„ Force,	
Sea,	
Weather,	
Barom.,	29·82 29·86
Thermom., Air,	
„ Sea,	
Hygrometer,	

7.27.W. 80. Sey

11.59.40.14.36
4 24 7
11.56.16 15.03
18.50
107.23
142.16
71.08
15 05
56 03

.02456
.02030
4.50970
4.91883
9.47539

19.34.55
13.36
19.48.91
11 53 16
7.53.15

12.00.07.15.02

18.52 118.41
8 17
18.47 118 58

118.2 3.30 P.M. 18 Sey

17.16.38
+4 02
17.20 40
90 2.12
107.22 52

13.41.74
- 4.02
13 37 72
2 00
+13.36

88 50
32 33
37.17
17.21
19 56

1 on Log

10 M - 18 28

8.12 W. 22 Lat

12.34.32 = 24.08 = 12.35.12 = 24.17

4.24 9

12.30.08 2418

1920

120.10 10657

15035

75.17

2414

3059

.02521

.01925

4.40480

4.89040

5.33980

20.17.08

13.44

20 30 47

12 30 8

8 00 39

108.SEbE 30 miles

E W S

18.50, 119.53

73 43

19.13 = 119.10

14.59.35

+4 2

17.03 37

90 2 12

107 05 49

13.49.64

4

13.43.64

	N	S	E	W
Wbly N 25	4m 4			24.6
NNW 46	42.5			17.6
SEbE 18		10.	15.0	
SW 20		14		14
	47.2	24	15	55.1
	24			
	23, 40			

12.31.30 = 22.26

13.34.35 = 34.48

4.24 10

13 30 11

105

14-04

119.04

14

21.12.37

13.31

21 26 28

13 30 11

7 55 17

34.38

19.47

106.30

161 35

80 47

34.5-8

45.49

.02642

.01902

4.20458

4.85559

9.10561

12.32.52 = 22.36

4 24 8

12.28.28 22.44

19.47

106.30

149 21

74 40

105.45 22.44

13 7 51.56

118.52

14 .02442

119.04 .01902

4.42232

4.89414

9.36390

20.10.04

13 61

2023 37

12 24 28

7 55 29

16.43.14

+4.12

16 47 26

90 2 12

106-49-38

13.57.13

-4 ca

13 53 13

-2 co

13.31 13

89.30

53 24

36 24

16.47

19-37

Nautical Diary and Day's Work Book, Diving from Hongkong to Hilo

6th Week.] Sunday, 2nd FEBRUARY, 1902. 10 day at Sea [33-332.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 16° 59′ 45″ / Appt. Noon, 16 59 35 } Var. 1 Hour, 42·99″ | Equation of Time, increasing, Sub. from Mean Time 13m 49·77s. / Add to Appt. Time, 13 49·84 } Var. 1 Hour, 0·321s. | Sun's Semi-Diam., 16′ 15″ | Sidereal Time, 20h 46m 58·33s.

This day comes in with light breezes pleasant Weather

Middle part fresh to strong breeze

Wore Ship to N W at 6 Am.

Latter part of the day blowing a hard Gale from N N E with high sea running

Ship under reefed topsails and courses

Overcast with low black scud. Barometer is higher than it has been for three days

38 on Log

Lat. by Obs., 18° 3·0 Dr.

Long. by Obs., 119°6·3

Course by Obs.,

„ by D. R.,

Distance by Obs.,

„ by D. R.,

„ by Log, 134

Current,

Var. used,

Dev. used,

Wind, Direct, NE by N

„ Force,

Sea,

Weather,

Barom., 30.10. 30.05-

Thermom., Air,

„ Sea,

Hygrometer,

6th Week.] MONDAY, 3rd FEBRUARY, 1902. 11 day at Sea [34-331.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 16° 42′ 25″ / Appt. Noon, 16 42 14 } Var. 1 Hour, 43·73″ | Equation of Time, increasing, Sub. from Mean Time, 13m 57·07s. / Add to Appt. Time, 13 57·13 } Var. 1 Hour, 0·287s. | Sun's Semi-Diam., 16′ 15″ | Sidereal Time, 20h 50m 54·89s.

First part of this day strong Gale from N E with high Sea

Middle part more moderate & Ran running out the reefs

4 Am Wore Ship. to E S E

Latter part strong breeze

Weather Overcast

55 on Log

Lat. by Obs., 19° 37′

Long. by Obs., 115° 26

Course by Obs.,

„ by D. R.,

Distance by Obs.,

„ by D. R.,

„ by Log,

Current,

Var. used, 5° E

Dev. used,

Wind, Direct, N E

„ Force,

Sea,

Weather,

Barom., 30.05- 30 15-

Thermom., Air,

„ Sea,

Hygrometer,

Nautical Diary and Day's Work Book, "Diriga" from Hong Kong to Hilo

6th Week.] TUESDAY, 4TH FEBRUARY, 1902. 12 day's at Sea [35.330.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 16° 24′ 47″ / Appt. Noon, 16 24 36 } Var. 1 Hour, 44·45″ | Equation of Time, increasing, Sub. from Mean Time, 14m 3·57s. / Add to Appt. Time, 14 3·62 } Var. 1 Hour, 0·25s. | Sun's Semi-Diam., 16′ 15″ | Sidereal Time, 20h 54m 51·44s.

This day comes in with Strong Breeze from N.E. Wore ship at 4 Pm

Middle part blowing a Gale with high Sea Ship under Topsails Reefed Main Sail & Courses furled

Latter part more moderate Set Reefed T.Gallant sails and Burnet reefs out of Courses.. Ship doing some Tall dancing Weather Overcast with Breaks at times

84 on Log

Lat. by Obs., [redacted]
Long. by Obs., 118°4
Course by Obs.,
" by D. R.,
Distance by Obs.,
" by D. R.,
" by Log, 129
Current, 25' WSW
Var. used, 6° E
Dev. used,
Wind, Direct, N E by N
" Force,
Sea,
Weather,
Barom., [redacted]030.20
Thermom., Air,
" Sea,
Hygrometer,

7.37.W- 63. Log

11.57.50. 15.22.
4 24 7
11.53.26 = 15 29
19.47
106.34
141.50
70.35
15.29
53 24

105-45
13 10
118.55

.02442
.01841
4.51447
4.91365
9.47495

18.35.05
14 00
18 49 05
11 53 24
7.55 39
89 50
52 30
37 20
14 30
20.50
2 3
20.77

19.04
18.42

7.49.W 63. Log

12.03.25. 16.31
12.03 52. 16.40
4 24 7
11.59.28 = 16 47
19.47
106 34
143 28
71 34
16.47
54 47

105-45
13 11
118.34

.02442
.01841
4.49994
4.91221
9.45480

18.41.13
14 00
18 33 13
11 59 28
7.33.45

16.47
18.59
106.34
143 20
71.40
16.47
54.53

.02697
.01841
4.49748
4.91274
9.45580

7 41.33
12- 14 00
18.53 33
11 58.45
7.35 48

37
23
13
37

16.24.36
3 48
14.20.24
50 3 24
104 33 48

14.03.02
2 00
14.01.02
1 12
×14.00

89.68
53 07
34 43
14.30
20.13

105-45
13 12
118 57
13
118.42

8.48 W. 97. Log

13.05.10. 30.48
4 23 10
13.00.47 30.58
19.29
104.16
120.32 154.43
10 78.21
120.22 30 58
47.23

.02541
.01744
4.30521
4.86482
9.21538

20.46.46
14 04
21 02 32
13 00 43
8.02 07

114
128

118.45-
120 22
1 37
97

20.13
19 38
35-
Sw
81-35-
S 68. E. 98.

14.04.41
+ 3-48
14.12.29
+ 50 + 3 24
104.15.53

14.08.31
- 2 00
14.07.31
- 1 12
+14-04 19

88.50
3 4 00
33 50
14 12
19.38
9
19.29

82

7.45 W. 2. Log

12.04. S-2.14.40 = 12.06.18.17°04

4 25- 4.25

12.00.27.14.48 12.01.33.17.14

20.20 20.40

105 5-8 105-58

143.04 14352

71.33 7164

14.48 1714

54 43- 54.42

SSE 4.9 NW 22 SW 5/8 23

20.50. 118.40

0.27.54 .02889

0.17.09 .01709

4.5-00.34 4.49153

4.91.20.3 4.91176

9.45-7.40 9.44927

18.41.00 18.43.43

14.11 14.11

19 55-11 18.57.54

12.00.27 12.01.53

7.34.44 7.56.01

105.30 105

13.11 14

118.41 118

20.50. 118.40

	N	S	E	W
SEbS 5.6		49.9	39.3	
NNW 22	20.3			8.4
SSW 23		20.6		13.9
		70.7	39.3	22.3
		20	22	
		50.7	17	

13.28.44.34.24 20.50. 118.40

105.45 50 11

18 3 20.00 118.51

118.48 9 118.40

118.40 105.38

16104

8032

34.24

46.04

21.09.44 .02888

14.11 .01709

21.23.55 4.21.610

13.28.44 4.85.766

7.55.11 911974

210

15.48.29 19.34. 120.22

+5.48 20.50 118.40

16 54 1.12 1.48

+90 +3 24 Sail 24

105.57 4 72.93

N 33 W 120

14.14.1

3

+14.11.19

19.34. 120.22

1.29 1.3

21.07 118.17

118.40

34

15.30.01

5-48

16.36.49

90. 3.24

105-39 1.8

14.18.21

-3.8

+14.13

89.50

53.34

36.16

15.34

20.42

Nautical Diary and Day's Work Book, "Diriyo" from Hong Kong to Hilo

6th Week.] THURSDAY, 6TH FEBRUARY, 1902. 14 day at Sea [37-328.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 15° 48' 40" / Appt. Noon, 15 48 29 } Var. 1 Hour, 45·83″ | Equation of Time, increasing, Sub. from Mean Time 14m 14·15s. Add to Appt. Time, 14 14·19 } Var. 1 Hour, 0·187s. | Sun's Semi-Diam., 16′ 15″ | Sidereal Time, 21h 2m 44·55s.

This day comes in with Strong Gale
With hard squalls of wind and rain
Wore Ship to N NW at 1 Pm. high Sea running

Middle part flowing hard Ship under
Reefed T'gs'ails and Courses

Latter part Strong breeze rain,
and high confused Sea

Lat. by Obs., 20° 50′
Long. by Obs., 118° 40
Course by Obs., N 5-3 W
,, by D. R., N 33 W
Distance by Obs., 120
,, by D. R., 104
,, by Log,
Current, 34
Var. used,
Dev. used, 5 E
Wind, Direct, NNE ENE
,, Force, Gale
Sea, high
Weather, C.
Barom., 30.20. 30.25
Thermom., Air,
,, Sea,
Hygrometer,

22 on Log

6th Week.] FRIDAY, 7TH FEBRUARY, 1902. 15 days at Sea [38-327.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 15° 30' 12" / Appt. Noon, 15 30 1 } Var. 1 Hour, 46·50″ | Equation of Time, increasing, Sub. from Mean Time, 14m 18·24s. Add to Appt. Time, 14 18·27 } Var. 1 Hour, 0·154s. | Sun's Semi-Diam., 16′ 14″ | Sidereal Time, 21h 6m 41·10s.

This day comes in with Strong breeze
& Pm blowing a gale. Ship under
Reefed T'gs'ails and Courses. Heavy
Sea running.. Middle part More Moderate
Wore ship to N NW at 4 A.M.
Latter part Moderated Shortened out
Reefs and set reefed T'gs'ails and
We have lost ten Miles during the
day

Lat. by Obs., 20° 42
Long. by Obs., 118° 32
Course by Obs., S 45° W
,, by D. R.,
Distance by Obs., 10 SW
,, by D. R.,
,, by Log, 91
Current, 40′
Var. used,
Dev. used, 5° E
Wind, Direct, NE
,, Force, Gale
Sea, high
Weather, Stormy
Barom., 30.20.
Thermom., Air,
,, Sea,
Hygrometer,

13½ on Log

Nautical Diary and Day's Work Book, "Diriyo" from Hong Kong to Hilo

6th Week.] SATURDAY, 8TH FEBRUARY, 1902. 16 day at Sea [39-326.

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 15° 11′ 28″ / Appt. Noon, 15 11 17 } Var. 1 Hour, 47·15″ | Equation of Time, increasing, Sub. from Mean Time, 14m 21·53s. / Add to Appt. Time, 14 21·56 } Var. 1 Hour, 0·120s. | Sun's Semi-Diam., 16′ 14″ | Sidereal Time, 21h 10m 37·99s.

This day comes in with Strong breeze
Choppy Sea and Heavy passing Clouds
Were Ship N5 ESE at 4 Pm
Middle part more Moderate and not so much
Sea. Were Ship at 8-30 Am.
This day Ends
With rain squalls wind
very unsteady and very Strong Current
48½ on Log at noon

Lat. by Obs., 20°0[illegible]
Long. by Obs., 118°2[illegible]
Course by Obs., S 5·8° [illegible]
„ by D. R.,
Distance by Obs., 62
„ by D. R.,
„ by Log, 135
Current, 40. SW
Var. used,
Dev. used,
Wind, Direct, NE
„ Force, fresh
Sea,
Weather, Squally
Barom., 30.20.9[illegible]
Thermom., Air,
„ Sea,
Hygrometer,

7th Week.] Sunday, 9TH FEBRUARY, 1902 (Quinquagesima—Shrove Sunday). 17th day [40-325.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 14° 52′ 29″ / Appt. Noon, 14 52 18 } Var. 1 Hour, 47·78″ | Equation of Time, increasing, Sub. from Mean Time, 14m 24·02s. / Add to Appt. Time, 14 24·04 } Var. 1 Hour, 0·087s. | Sun's Semi-Diam., 16′ 14″ | Sidereal Time, 21h 14m 34·21s.

This day begins with rain Squalls and unsteady
Winds. Were Ship 15 E.by.S. at. 4. Pm..
Were Ship at midnight 15 WNW
Middle part Squally wind shifting two
and three points in the Squalls
Were Ship to E.by.S. at 6 Am..
Latter part of this day
Unsteady wind Squalls of Wind and rain
Not much wind between Squalls
Heavy Tide rips
6 G on Log

Lat. by Obs., 20°10
Long. by Obs., 118°49
Course by Obs., East
„ by D. R.,
Distance by Obs., 20
„ by D. R.,
„ by Log, 118
Current,
Var. used,
Dev. used,
Wind, Direct,
„ Force,
Sea,
Weather,
Barom.,
Thermom., Air,
„ Sea,
Hygrometer,

4, 54, W 90, Log

12, - 24, = 38 = 21.59,
4 25 8
12, 20, 14 = 22 07
20,00
105,20
147 27
73.43
22,07
51,36

105
14 32
119 32
11
119 21

.02701
.01574
4,44772
4,89415
5,38444

20.04-01
14,20
20 18 21
12 20 14
7,38 07

12, 25, 17 = 22,13
4,25 8
12.20.52 = 22,21
20,00
105-20
105-30 147 41
14 8 73,50
119.38 22,21
11 51,29
119.24

.02707
.01574
4,44472
4,89344
5,38091

20,05,08
14 20
20 19 28
12 20 52
7,38 36

15, 11, 17
+ 5, 48
15-17-05
+90+2 5-4
105-19 = 5-9

118,32 20,42
119,28 20 8
56 33
Sat
93. 5-2

S 5-8° E. 62

14 21,76
-1 18
14,20,58
-48
+14,20-10

8950
5424
3526
1319
20,09

11.A.M.

8, 35, W, 51, Log

12, 54, 16, 28,07,
4,25 9
12,48,51 = 28,16
20,20
105,01
105-30 15337
14 4 4448
119,34 24,16
13 48 32
119,49

.02784
.01509
4,33840
4,87448
5,27631

20,33,53
14 22
20 48 13
12 49 51
7,38,24

12, 54, 44, 28, 13 =
4,25 9
12, 50, 19, 26, 22

8, 53, W,

13, 14, 28 = 32,07
4 25 9
13.10.03. 32 16
20.18
105,07
105-30 13435
14.5 7847
119.35 32 16
13 46,31
119,48

.02785
.01509
4,28896
4,86068
5,19258

20, 54, 01
14 22
21 08 23
13 10 03
7, 38 20

14, 52, 18
5 48
14,38 04
90. 2,54
105,01 00

14,24,0[illegible]
11
14 22 4[illegible]
4
14,22

8850
5424
3326
1319
2019

20.1[illegible]

11.20 am alt 5-3°18 = 11.30 alt. 5°3.5'5 .. 11.40 am alt 5-4.18'
33

Wore Ship 3 Pm. K 2 on Log

8, 35, W. 37, Log.

12. 55. 00. 27. 41
4 25 ☾

12. 50. 35 = 27. 50
105 30 20-25
13 14.30 104.44
118.44.30 152.59
76.29
27.50
48.39

.0 2 8 18 | 20.31.10
.0 1 4 5 2 | 14.23
4.3 6 8 71 | 20.45.33
4.8 7 5 44 | 12.50.35
☾ 2 8 6 87 | 7.54.38

12. 55. 51. 27° 5.2'
4.25 ☾

12-50-26 = 28.01
105 30 20.32
13 14.30 104.44
118.44 30 153 17
13 76-34
118.25 28 01
20.31.07 48.37
14 23
20.43.24
12 50 26
7.54 38

.0 2 8 51
.0 1 4 52
4.3 6 824
4.8 7 524
☾ 2 8 751

119.28
114 25
1.03

Sat Dep.
30 = 5-8.2 N 62° W - 67

14.33.0
5-4
14 38 3
30 4 3
10 4.43.4

14.25.
2
-14.23

8 8 57
5 4 32
3 3 18
1 4 39
2 0.3 9

WNW. 118
EbS½S. 72
SbyW 25

	E.	W.	N.	S.
		17.6	7.3	
	68.9			20.9
		20.8		13.9
	68.9	38.4	7.3	34.8
	34.4			7.3
	30.5			27.5

Sat
20.39
26
20.13

118.25
32
114-57

8, 31, W. 64. Log.
12.54.44. 28.49
4 25 ☾
12.52.19 28.58
20 02
104 24
133 24
76.42
28.58
47.44
0 2

.0 2 7 11
.0 1 3 84
4.3 4 182
4.8 6 824
☾ 2 7 2 03

105 15
1 4 1
119.16
2
119.18

20.34.59
14.23
20.49 22
12 52 19
27.57 03

14, 13, 38
3- 48
14.19. 23
+90 +4 54
104.24.1

14.20.4
2
+14 23

8 9 57
3 3 21
3 4. 2
1 4 1 8
2 0.1 0

12, 57, 12. 28. 56
4.25 ☾
12, 52, 47 = 29 05
20.13
105 15 104.11.24
1 4 8 153 42
119.24 76 5-1
29.05
47.46

20.36.0W
14 23
20.3 0 23 .0 2 7 4 2
12 5 2 47 .0 1 3 8 4
7.54.36 4.3 5 6 9 8
4.4 6 8 4 7
☾ 2 6 7 9 3

11.10 am. alt. 53.15 = 11.20 am. alt. 54.35

5-5.2
5 3 15
2. 4

Nautical Diary and Days' Work Book, "Dirigo" from Hong Kong to Hilo

7th Week.] MONDAY, 10TH FEBRUARY, 1902. 16 day at Sea [41-324.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 14° 33' 15" / Appt. Noon, 14 33 3 } Var. 1 Hour, 48·40" | Equation of Time, increasing, Sub. from Mean Time, 14m 25·71s. Add to Appt. Time, 14 25·73 } Var. 1 Hour, 0·0548. | Sun's Semi-Diam., 16' 14" | Sidereal Time, 21h 18m 30·77s.

The first part Moderate. Wore ship to nw at 8 Pm
Middle part heavy Squalls with torrents of rain
Tides rips and overfalls throughout the day
Squalls twoks off the latter part and the
day ends with fresh breeze overcast
Wind N N E. to N E. & unsteady we can
not make anything on either tack. Wind veered
Shift four points in the squalls. We have lost
round the past three day's
Cape Horn is not in it with this lay out
5-2 on Log

Lat. by Obs., 20° 39'
Long. by Obs., 118° 28'
Course by Obs., N 62° W
„ by D. R.,
Distance by Obs., 67
„ by D. R.,
„ by Log, 84
Current, 30° SW½W
Var. used,
Dev. used,
Wind, Direct, Nor E by E
„ Force, Strong
Sea,
Weather, Squally
Barom., 30.15 - 30.20
Thermom., Air,
„ Sea,
Hygrometer,

7th Week.] TUESDAY, 11TH FEBRUARY, 1902. 17 day at Sea [42-323.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 14° 13' 46" / Appt. Noon, 14 13 35 } Var. 1 Hour, 48·99" | Equation of Time, increasing, Sub. from Mean Time, 14m 26·62s. Add to Appt. Time, 14 26·62 } Var. 1 Hour, 0·021s. | Sun's Semi-Diam., 16' 14" | Sidereal Time, 21h 22m 27·32s.

This day begins with a strong breeze and
squally weather. Wore ship at 4. 0m to E S E
Middle part the same. Ships under reefed
T'gall sails. the greater part of the time
Wore ship to N. W. by W. at 9.30 am.
Latter part of the day strong breeze or
should say Gale. Handed T'gallant sail and
Reefed mainsail high sea running. Have
hauled T'gallant sails four times during the day
Squalls very hard. 8 2. on Log.

Lat. by Obs., 20° 10
Long. by Obs., 119° 18
Course by Obs., S 62° E
„ by D. R.,
Distance by Obs., 62'
„ by D. R.,
„ by Log, 112
Current,
Var. used,
Dev. used,
Wind, Direct,
„ Force,
Sea,
Weather,
Barom.,
Thermom., Air,
„ Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Darigo" from Hong Kong to Hilo

7th Week.] WEDNESDAY, 12TH FEBRUARY, 1902 (Ash Wednesday). 20 day [43-3

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 13° 54′ 4″ / Appt. Noon, 13 53 52 } Var. 1 Hour, 49·57″ | Equation of Time, increasing, Sub. from Mean Time, 14m 26·73s. / Add to Appt. Time, 14 26·73 } Var. 1 Hour, 0·012s. | Sun's Semi-Diam., 16′ 13″ | Sidereal T 21h 26m 2

This day comes in with a Strong gale from ENE With heavy Sea. Squalls very heavy At 1. am Wind shifted to NNE in a squall And Moderated. Wore ship to E by S at 8.am Ques cort and running.

This day ends with Moderate unsteady breeze. Weather overcast Rain at Times

S 7 on Leg

Lat. by Obs., 20°5
Long. by Obs., 118°
Course by Obs.,
" by D. R., N 24°
Distance by Obs.,
" by D. R., 57
" by Log, 117
Current, 25 SW
Var. used,
Dev. used,
Wind, Direct, NNE to E
" Force.
Sea,
Weather,
Barom., 30.27
Thermom., Air.
" Sea,
Hygrometer,

7th Week.] THURSDAY, 13TH FEBRUARY, 1902. 21st day at Sea. [44-321.

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 13° 34′ 7″ / Appt. Noon, 13 33 55 } Var. 1 Hour, 59·13″ | Equation of Time, decreasing, Sub. from Mean Time, 14m 26·07s / Add to Appt. Time, 14 26·06 } Var. 1 Hour, 0·044s. | Sun's Semi-Diam., 16′ 13″ | Sidereal Time, 21h 30m 20·43s.

She first and middle part of this day Moderate breze from NNE. hazy Weather. at 4.am Wore ship to NW 8 am Wore to East. Latter part heavy squalls of Wind and torrents of Rain. Wore ship at Noon to N.W. blowing a whole Gale with heavy Squalls. Ship under Lower Topsails and Storing all we have gained for a week

100 Log

Lat. by Obs., 20°2
Long. by Obs., 119°5 7
Course by Obs., S 2 E
" by D. R.,
Distance by Obs., 63
" by D. R.,
" by Log, 103
Current,
Var. used,
Dev. used,
Wind, Direct,
" Force,
Sea,
Weather,
Barom.,
Thermom., Air,
" Sea,
Hygrometer,

	E	W	N	S
NW by N 20		11.1	14.9	
NNW 5·8		22.2	33.4	
SW by W 25		20.8		13.9
E by S ½ S 37	33.4			10.7
	33.4	33.4	49.5	24.6
		33.4	24.6	
		18.7	44.9	

20.10. 118.18
44 25
20.54 118.53
N 24 W 57

	E	W	N	S
SW by W 25		20.8		13.9
E S E 73	67			27
	47	20.8		40

20
57

118.00 - 20.50
1.1 46
120.1 20-10

11.12.am Alt 53.02 1.48.

116.53.	20 50	60.30
119 57	20.20	
1.04	.30	

D.e
13.53. 53-2
4 4 24
14.00.16
3.42

Eq
14.24.73
- 42
14.24 31
- 18
14.24.13

69 50
55-00
3 4 50
1 4 00
2 0.56

13.33.53
+ 6 36
13.40.31
+ 20 + 3 42
103.44 13

14.26.06
- 42
14.25.24
- 24
14-25 00

NAUT. EPHEMERIS,	Sun's Declination, decreasing,	Mean Noon, S 13° 13′ 58″ / Appt. Noon, 13 13 46	Var. 1 Hour, 50·67″	Equation of Time, decreasing, Sub. from Mean Time, 14m 24·64s. Add to Appt. Time, 14 24·62	Var. 1 Hour, 0·076s.	Sun's Semi-Diam., 16′ 13″	Sidereal Time, 21h 34m 16·98s.

This day comes in with a strong gale from ENE High Sea very heavy squally of Wind and torrents of rain. Middle part the same, except the rain" Latter part more moderate. Wind NE. Set Topsails whole, and turned reef out of the Foresail Day ends with moderate Breez. Weather overcast Topgallant Sails set reefed

Lat. by Obs., 21°24′
Long. by Obs., 118·46
Course by Obs., N 43 W
„ by D. R.,
Distance by Obs., 93.
„ by D. R., 104
„ by Log, 84
Current, 25 SWgW
Var. used,
Dev. used,
Wind, Direct, ENE
„ Force, Gale
Sea,
Weather, Rainy Squally
Barom., 30 28 . 30.30
Thermom., Air,
„ Sea,
Hygrometer,

87 on Log at noon

NAUT. EPHEMERIS,	Sun's Declination, decreasing,	Mean Noon, S 12° 53′ 36″ / Appt. Noon, 12 53 23	Var. 1 Hour, 51·19″	Equation of Time, decreasing, Sub. from Mean Time, 14m 22·43s. Add to Appt. Time, 14 22·41	Var. 1 Hour, 0·108s.	Sun's Semi-Diam., 16′ 13″	Sidereal Time, 21h 38m 13·54s.

This day comes in with a strong N E breeze weather overcast.

Middle part blowing hard with a high sea at 2 am got a cast of the lead and found 25 fathom were ship. at 8 am. to S.E. strong breeze reefed main sail and cross jack

Latter part more moderate our position at noon is thirty miles west of any allowance we have made yet for leeway and current

The strong winds of the past week has increased the current one half

We are twenty three days at sea. and we are only 200. miles east of where we started from

Lat. by Obs., 21°57
Long. by Obs., 117°47
Course by Obs.,
„ by D. R.,
Distance by Obs.,
„ by D. R.,
„ by Log, 128
Current,
Var. used, 13
Dev. used, 15
Wind, Direct, 128
„ Force,
Sea,
Weather,
Barom.,
Thermom., Air,
„ Sea,
Hygrometer,

Noon. 5-4° 5-3′
at 11.40. 5-4° 20′
alt at 11.15. am 32° 35′ at 11.25. = 5-3° 30 = at 11.30 = 5-3. 5-5

15 on Log

Nautical Diary and Day's Work Book, "Diriigo" from Hong Kong to Hilo

8th Week.] Sunday, 16TH FEBRUARY, 1902 (Quadragesima—1st Sunday in Lent). 24th day [47-31

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 12° 33′ 1″ / Appt. Noon, 12 32 48 } Var. 1 Hour, 51·70″ | Equation of Time, decreasing, Sub. from Mean Time, 14m 19·47s. / Add to Appt. Time, 14 19·44 } Var. 1 Hour, 0·139s. | Sun's Semi-Diam., 16′ 13″ | Sidereal Time 21h 42m 10

This day begins with moderate uns steady breeze Weather hazy, sea quite smooth
Wore Ship to N.N.W.
at 6. am
During the middle part weather the same. Wore Ship to E.S.E at 6. am. We have not been able on account of sea and Current To tack ship this passage
This day ends with light breeze smooth sea and fine Weather
Gen Log at noon

Lat. by Obs., 22° 0
Long. by Obs., 114°
Course by Obs., E 6° N
„ by D. R.,
Distance by Obs., 24
„ by D. R.,
„ by Log, 21'
Current, 25·5
Var. used,
Dev. used,
Wind, Direct, N E
„ Force. M
Sea, choppy
Weather, C.
Barom., 20.25
Thermom., Air.
„ Sea,
Hygrometer,

8th Week.] MONDAY, 17TH FEBRUARY, 1902. 25th day at Sea. [48-317

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 12° 12′ 14″ / Appt. Noon, 12 12 2 } Var. 1 Hour, 52·19″ | Equation of Time, decreasing, Sub. from Mean Time, 14m 15·77s. / Add to Appt. Time, 14 15·73 } Var. 1 Hour, 0·170s. | Sun's Semi-Diam., 16′ 13″ | Sidereal Time 21h 46m 6·64s

This day comes in with light baffling Winds. smooth sea, and fine Weather
Wore ship to NNW
at 6. Am.
Middle part much the same
Wore ship to E S E at 6. am. fresh breeze.
Latter part Moderate breeze baffling two points 25 miles current S.W. by W.

Lat. by Obs., 21° 5
Long. by Obs., 118° 5
Course by Obs., S 74° E
„ by D. R.,
Distance by Obs., 37
„ by D. R.,
„ by Log, 32
Current, 25 · SW
Var. used,
Dev. used, 3° E
Wind, Direct, NE by N
„ Force, M.
Sea,
Weather,
Barom.,
Thermom., Air,
„ Sea,
Hygrometer,

9.8 on Log

7.30, W. 92 on Log
12.24.27 = 21-24
4 24
2.22.03 . 21-34
22.09
102 44
146.27
105° 45 73.13
12 10.30 21.34
117.56 31.39
12
118.04
.03330
.01081
4.460 53
4.89445
9.39909
18.59.21
14 22
20.13.43
12 22 01
7.51.42
S 42. W
180
42
98
103
5-
Alt at 11.10. am

12.27.39 = 21.37
118.°23' 14 on Log
5-40 30
14 20
5-54 50
10.05-37
4 24
10 1 11
17.54.56
10 1 11
7.53.39
105-15
13 10
118.25
Dev 5-0 W
55.10
3 35
1.25-
Alt at 11.20. am 5-3° 35-

8.40. W. 95
13.15.22.31.26
4 24 9
13.10.56. 31.35
22.09
105- 102 44
13,3 136 28
118.03 78 14
12 31 35-
118.15 46.39
.03330
.01081
4.30947
4.86164
9.21522
20.48.48
14 22
21.03 10
13.10 56
7.52.14
Alt at 11.30 am 54° 20'

12.32.44
+6.44
12 39 34
90+4
102=43.34
m
14.19-44
1-16
14-21-02
48
+14.21.50
89 50
5-3-10
3 4 40
12 40
22.00
12 diff
14.21.02
14.20
5-3-.10
3 3 35
1 35
55.10
54 20
30.

8.02.W = 78. Log
12.26.33 = 22.09
4.24 9
12-22-07 = 22-18
21.59
102 23
146 40
105° 30 73.20
13 3 22 18
118.33 51.02
20
118.54
.03278
.01022
4.45754
4.89041
9.39925
20.02.00
14 18
20.16 18
12 22 07
7.54 11

m
12.27.07.22.17
4 24 9
12.22 41 = 22 24
21 59
105-30 102.23
18 4 146 48
114.34 73 24
20 22.26
114 54 3058
.03278
.01022
4.45589
4.89030
9.38919
20.02.40
14 18
20 16 38
12 22 41
7.54.17
W alt
11.25 54 25

22,00 118.15
21 30 114 54
18 39
Sat Dec
10 = 34 = S 74° E 37
3.30 Pm 11 on Log
Lon 118. E

12.12.08
+6.48
12.18.56
+90+4.00
102:22=56
14.15.78
1 18
14 17 31
48
+14 18 19
89 30
5-4.41
3 4 08
12 18
21.30
8
21.38
16
24 diff

8, 10, W. 59. Log

12, 33, 06. 24, 12
4 24 9

12 · 28 · 40 = 24. 21
21. 35
102.02

105° 45′ 147.58
1 3 10 73.59
118.55 24 21
49.38

·0 3 1 5 7
·0 0 8 6 5
4.4 4 0 7 8
4.8 8 1.9 1
5.3 6 3 9 1

20. 10. 06
14 1 3

20-24-19
12.28 40
7.55 39

12, 33, 37. 24, 18
4.24 9

12. 29. 11. 24, 27
21, 28
102, 02

105° 45′ 147 57
1 3 5 73 58
118.50 24.27
10 49.31
119.00

·0 3 1 2 2
·0 0 8 6 5
4.4 4 1 2 2
4.8 8 1 1 5
5.3 6 3 2 4

20 10. 18
14. 14

20.24 32
12.29. 11
7.55 21

Britannia Shell Quebrada
Sailed from Hong Kong Dec. 9
Passed to Tasmania

7. 9. am 43. Log
11. 34. 45, 12. 00

21.18 119 00
21 4 119 32
14 32
Lat Dep.
14 30

S 66° E 35 miles

11. 36. 42
96 4, 00
10 1, 32 42

8, 32, W 50. Log
13, 03. 31 - 31. 06
4 24 10

12 - 59 - 05 = 31 16
21. 20
107. 42

105° 15′ 134 1.5
14 4 7707
119.19 31.14
45.53

·0 3 0 8 3
·0 0 9 1 2
4.3 4 7 1 3
4.8 5 6 0 8
5.2 4 3 1 6

20, 42 12
14 8

20, 5 4 20
12 38 5
7. 57, 13

13.04. 02. 31-11
4 24 8

12, 59, 36 = 31 20
21 13
107 42

105° 15′ 134 1.5
14 7.30 77 07
119 22 31.20
10 45.47
119.32

0 3 0 4 8
0 0 9 1 2
4.3 4 8 2 4
4.8 5 5 3 4
5.2 4 3 1 8

20. 42, 8
14 8

20 5 7 6
12 3 8 30
7. 3 7. 30

11° 20. 6
4 4
50. 4 6
101 2

14 m ...
14 07. 3
+14. 08.

8 9 5 7
5 7 0 5
3 2 4
1 1 3
21. 09

21. 13

AUT. EPHEMERIS, { Sun's Declination, decreasing | { Mean Noon, S 11° 51′ 16″ / Appt. Noon, 11 51 3 } Var. 1 Hour, 52·66″ | Equation of Time, decreasing, Sub. from Mean Time, 14m 11·35s. / Add to Appt. Time, 14 11·30 } Var. 1 Hour, 0·200s. | Sun's Semi-Diam., 16′ 12″ | Sidereal Time, 21h 50m 3·20s.

This day comes in with light baffling Winds and rain Squalls from 8. Pm to 3 am. we Were shifting Sheets four times Wind shifting two and three points every Hour.

At daylight sighted a ship in company Under Reefed Sails.

Signaled British ship "J. D. Everett" from Manila

At noon our position is 22° S 1/2 E of where it was yesterday. Owing to the Strong Current baffling wind and having to wear Ship so often we have lost ground. Are we ever going to get out. Four reefed Schooner in sight

73. Log at noon

Lat. by Obs.,	21. 18
Long. by Obs.,	119° 00
Course by Obs.,	S 5° E
,, by D. R.,	
Distance by Obs.,	32
,, by D. R.,	
,, by Log,	75
Current.	
Var. used,	
Dev. used,	
Wind, Direct,	
,, Force,	
Sea,	
Weather,	
Barom.,	
Thermom., Air,	
,, Sea,	
Hygrometer,	

AUT. EPHEMERIS, { Sun's Declination, decreasing. | { Mean Noon, S 11° 30′ 6″ / Appt. Noon 11 29 54 } Var. 1 Hour, 53·12″ | Equation of Time, decreasing / Sub. from Mean Time, 14m 6·21s. / Add to Appt. Time, 14 6·15 } Var. 1 Hour, 0·229s. | Sun's Semi-Diam., 16′ 12″ | Sidereal Time, 21h 53m 59·75s.

This day begins with moderate breeze unsteady and puffy. Wore ship to N.W. at 7. Pm 6 ships and a Schooner in company Middle part squally with rain Wore ship to E by S at 3. Am

We Dare this same Schooner twenty five day ago. so we are not the only one that is getting a set back

This day ends with moderate unsteady Winds hazy weather Wore ship to N. at M.

57. 9

63 on Log

11. 15 am alt ☉ 12, = 54. 50 at 11. 42

Lat. by Obs.,	21° 04
Long. by Obs.,	119° 32
Course by Obs.,	
,, by D. R.,	
Distance by Obs.,	35′
,, by D. R.,	
,, by Log,	80
Current.	25 miles
Var. used,	E E
Dev. used,	5° E
Wind, Direct,	N E by N
,, Force,	M
Sea,	
Weather,	squally
Barom.,	
Thermom., Air,	
,, Sea,	
Hygrometer,	

Nautical Diary and Day's Work Book, "Virigo" from Hong Kong to Hilo

8th Week.] THURSDAY, 20TH FEBRUARY, 1902. 28 Day at Sea

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 11° 8′ 46″ / Appt. Noon, 11 8 34 } Var. 1 Hour, 53·56″ | Equation of Time, decreasing, Sub. from Mean Time, 14m 0·37s. / Add to Appt. Time, 14 0·31 } Var. 1 Hour, 0·258s. | Sun's Semi-Diam., 16′ 12″ | Sidereal 21h

This day comes in with light baffling airs and rain squalls wind shifting four points Wore ship three times before midnight Middle part fresh gale from NE. with hard squalls of wind and rain.

6 Am. Wind NNE fresh breeze with squalls. Wore ship to ESE. Day Ends with Steady Steady breeze pleasant weather

49. on Log

Lat. by Obs., 21°
Long. by Obs., 118
Course by Obs., N
,, by D. R.,
Distance by Obs., 4
,, by D. R.,
,, by Log, 8
Current.
Var. used, 25 S
Dev. used,
Wind, Direct, 5°
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

8th Week.] FRIDAY, 21ST FEBRUARY, 1902. 29 day at Sea [52-

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 10° 47′ 15″ / Appt. Noon 10 47 3 } Var. 1 Hour, 53·99″ | Equation of Time, decreasing, Sub. from Mean Time, 13m 53·85s / Add to Appt. Time, 13 53·79 } Var. 1 Hour, 0·285s. | Sun's Semi-Diam., 16′ 12″ | Sidereal 22h 1m

This day begins with a strong breeze and high sea. Wore ship to NNW. at 8 am. Middle part heavy squalls of Wind and Rain 3 am wore ship to S by S. 7 am wore ship to NNW Wind very unsteady. we just get Stearsail up on one Tack when the wind breaks to Shut off four points. then we have about one and a half miles warning ship.

49. Logs

Lat. by Obs., 21°
Long. by Obs., 115
Course by Obs., S 2
,, by D. R.,
Distance by Obs., 5
,, by D. R.,
,, by Log, 10
Current. 30 SWly
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

8. 31. W. 30 Lg

12. 55. 16. 29. 031
4 24 09

12. 50. 50 29. 12
21. 27
107. 19
105 30 1 51 58
13 8 75. 59
18.34 29. 12
20 46. 47
18. 54 .0 3117
.0 0853
4.3 8418
4.8 6259
5.2 8647
20. 31. 17
14 03
20 45 20
12 50 56
7. 54 30

12. 55. 56 . 29. 08
4.26 9
12-51-30- 29. 18
21, 27
105 30 101. 19
13 1 152 04
118.31 76 02
29. 18
46. 44
.0 3117
.0 0853
4.3 8244
4.8 6223
5.2 8459
20. 31. 30
14 3
20- 45- 33
12 31 30
7, 54 03

21. 04. 119. 32
21 20 119 58
24
Lat 24
24°. 34.7 N S-8-W 40

21. 27 118. 31
14 36
118.07

118. 04 - 3.15 Pm

11. 08. 34
6 48
11 15 22
80. 4 00
101. 18. 22

14. 00. 31
14. 2. 31

8 9 50
5 4 55
32 35
1 1 5
21. 20

7, 54, W 33. Log

12, 19, 39. = 22. 17
- 4, 24 8
12- 15- 13= 22 25
21 23
100. 58
105 144 46
14 13 72. 23
18, 13 22 25
13 45. 54
18. 00
.0 3087
.0 0800
4. 4809 4
4. 8840 4
5. 4039 5
18. 56. 10
13 54
20 12 06
12 13 13
7. 56 53

12. 20. 12. 22. 24
4 24 8
12. 15. 46 = 22 32
21 23
105 100. 58
+ 4 13 144 56
118.13 72 24
13 22 32
119. 00 49. 54
.0 3087
.0 0800
4. 4798 4
4. 8836 2
5. 4023 3
18 58 40
13 54
19 12 36
12 15 44
7. 56 50

21, 20
11
118.58
10
21.11. = 118.08

Course	Dis.											
ESE	96	33.3					S	13.8				
NNW	15						N		17.6		13.8	
SEbE	25	20.8					W	7.3		16.4	11.1	13
NWbW	20									20.8		24.7
SWbW	25											38.7
												28
												11.4

5-41 | 44 | 8

10. 47. 03
6 48
10 53 51
90 4 00
100. 37 51

13, 53, 40
2
+13 54

8 9 50
5 4 41
32 09
1 0 5-4
21, 1 5

Alt at 11, 10. am 55° 35- at 11. 20 = 56° 15 at 11.30 = 5-6° 5-3- at 11-40 = 57.°20

AUT. EPHEMERIS,	Sun's Declination, decreasing	Mean Noon, S 10° 25′ 35″ / Appt. Noon 10 25 22	Var. 1 Hour, 54·39″	Equation of Time, decreasing, Sub. from Mean Time, 13m 46·68s. / Add to Appt. Time, 13 46·61	Var. 1 Hour, 0·313s.	Sun's Semi-Diam., 16′ 11″	Sidereal Time, 22h 5m 49·41s.

This day comes in with fresh NE breeze high seas Weather clear. heavy Tide overfalls Middle part wind fresh unsteady from NE to NE by E Latter part fresh breeze. The ship has made a Westerly N.W.N. course by compass and has sailed 100 miles with a breeze to carry reefed T.G.sails allowing 1½ points for Lee way we have had a current setting W.S.W 30 miles but much prospect of getting out of this trap for a month yet. if we do this

4 P on Log

Lat. by Obs., 22° 20
Long. by Obs., 117. 14
Course by Obs., N 57 W
,, by D. R.,
Distance by Obs., 117
,, by D. R.,
,, by Log, 100
Current. 30 WSW
Var. used,
Dev. used,
Wind, Direct, NE
,, Force, strong
Sea, choppy
Weather, fine
Barom., 30.28
Thermom., Air,
,, Sea,
Hygrometer,

AUT. EPHEMERIS,	Sun's Declination, decreasing,	Mean Noon, S 10° 3′ 45″ / Appt. Noon 10 3 32	Var. 1 Hour, 54·78″	Equation of Time, decreasing Sub. from Mean Time, 13m 38·86s. / Add to Appt. Time, 13 38·79	Var. 1 Hour, 0·339s.	Sun's Semi-Diam., 16′ 11″	Sidereal Time, 22h 9m 45·96s.

This day begins with a strong breeze from NE high sea. 8-30 Am made the light on Breaker Point bearing west. Wore ship to S.E. Wind having backed to E.N.E. Breaker Point is 150 miles E.N.E. from Hong Kong and it is a month since we sailed. and it has been a month of hard work both for ship and crew we have stretched the life out of all my best sails and running gear trying to get some where.

day ends with moderate breeze and pleasant weather

Henry Tide trips

67. on Log

Lat. by Obs., 22° 04
Long. by Obs., 117 48
Course by Obs., S 58° E
,, by D. R.,
Distance by Obs., 96
,, by D. R.,
,, by Log, 118
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Hong Kong to Hilo

9th Week.] MONDAY 24TH FEBRUARY, 1902. 31 days at sea [5

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 9° 41' 45" / Appt. Noon 9 41 33 } Var. 1 Hour, 55·16" | Equation of Time, decreasing, Sub. from Mean Time, 13m 30·43s. Add to Appt. Time, 13 30·35 } Var. 1 Hour, 0·364s. | Sun's Semi-Diam., 16' 11" | Sidera 22h 13

The first and middle part of this day light unsteady winds and pleasant weather.

8.30 Pm. Wore Ship to N by W. Backed at 6.30 am to ESE

Day Ends with light baffling winds 11.30 Wore ship to N by W.

Mercury Current

46. on Log

Lat. by Obs., 22°
Long. by Obs., 118
Course by Obs., E 1/
,, by D. R.,
Distance by Obs., 6
,, by D. R.,
,, by Log, 8
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

7.31.W = 40. Log

12.01.10 = 17.34
4.24 8
11.54 44 17.42
22 14
105 99.52
13.5 139 50
14.5 49 55
2 17 42
116.7 52.13

.03366
.00647
4.53578
4.89781
8.47372

15 35.29
13 33
19 49 04
11 56 44
7.52 20

12.01.45 = 17.43

8.12.41.25.34
8.13 12.25.30
4.24 8
8.08.46.25.38
22.20
99.23
147.21
73.40
25.38
48.02

.03386
.00585
4.44905
4.87130
8.36006

8.38.47
24 13 23
27 52 10

8.41.33
4 W
8.48.33
30 3 36
99.52.09

13.30.45
4
+13.35 —
89.50
37 33
91 55
9 49
22.06

7.11.W 44 Log
11.40.06 13.04
4 24 6
11.35.40 = 13 10
22 25
99 36
105 135 05
13.2 67.32
1.82 13.10
2 54 22
116.4

.03412
.00400
4.58223
4.90996
8.53231

19.14.20
13 24
18 27 44
11 33 40
7.52.06

11.40.63. 13.°14'
4.24 6
11.36 27 = 13.20
22 25
99.36
105 135 15
13.1 67 37
1.82 13 20
2 54.17
116.1

.03412
.00400
4.58078
4.90851
8.53033

19.15.05
13.24
18 28 31
11 34 27
7.52 04

3.34.W 70. Log
8.00.25.32.10.
8.01 02.32.3 +
4 24 9
7.56.36.32 12
22 20
99.23
155 55
76 57
32 12
44.43

.03386
.00588
4.35373
4.84758
9.24102

9.19.24
7 W
9.26.24
80. + 3 36
89.30 00

III Sur. III
13.21.31
+ 4
+13 25.31

89 50
5 8 01
31 49
9 26
22.23

alt. 55° 50' at 11.10 am

at 11.20 = 54° 35'

@. 11.30 - 57° 15 = 11.40 =

57.° 45'

9th Week.] TUESDAY, 25TH FEBRUARY, 1902. 32 days at Sea [56

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 9° 19' 37" / Appt. Noon 9 19 24 } Var. 1 Hour, 55·52" | Equation of Time, decreasing, Sub. from Mean Time, 13m 21·40s Add to Appt. Time, 13 21·31 } Var. 1 Hour, 0·389s. | Sun's Semi-Diam., 16' 11" | Sidereal 22h 17m

Throughout this day light baffling airs and calms

At daylight took a cast of the lead and found 30 fathoms. Ship having drifted to the Westward twenty miles. The greater part of the day we have been heading to the Eastward with Blue Jays way but not enough way for the log to register

67. Log

Lat. by Obs., 22°
Long. by Obs., 118
Course by Obs., N
,, by D. R.,
Distance by Obs., 18
,, by D. R.,
,, by Log, 21
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

8.1.W. 10. Log

12. 29. 53. 24. 40
4 26 9
12. 25. 27 = 24. 49
22.12
99.09
105·30 146 10
13 4 73 05
118.36 24.46
18 48.18
118.54

12, 31, 00 = 24. 56
4.26 9
12.26.34 = 25. 05
22,12
99 09
105·30 146 26
13 4 73.13
118,36 25,03
18 48 08
118,54
.03345
.00556
4.46384
4.87322
9.37609
20.06.33
13 16
20 18 49
12 25 27
7.54 22

12, 33, 53, 25. 36
4 26 9
12 29 27 25 45
22 12
99.09
105.30 147 06
13 12 73.33
118.42 25 45
18 47 48
119.00
.03345
.00556
4,45204
4,86970
9,36077
20.11.01
13.16
20 24 17
12 29 27
7.54.50

8.57
5. 04
50
99 09
13. 1
13. 1
13. 1
8 9.
5 8
3 1
9
2 2
9 9.
9 9

8.12.W 95. Log
12,37,50 = 27,46
4.26 9
12,33,24 27 55
21 57
98,46
105 45 148 38
14 8 74 19
119,33 27.55
7 46.24
120.00
.03248
.00510
4,43148
4.85944
9,32950
20,19,49
13 07
20 32 56
12 33 24
7,59,32

12,38,48, 27,57
4 24 9
12,34,22 = 28,04
21 57
98,46
105 45 148 49
19 4 74 24
119 51 28.06
7 46.18
119,58
.03248
.00510
4.42942
4,85912
9.32652
20.20.38
13 07
20 33 45
12, 34 22
7,59,23

12,39,33 = 28.08
4,26 9
12.35.07 = 28, 17
21 57
98,46
105,45 149,00
14 8 74,30
119.53 28,17
7 46,13
120 00
.03248
.00510
.42690
4.85451
9.32319
20, 21, 32
13 07
20 34 39
12 35 07
7.59 32

21.
8. 3
8.4
90 4
98.46
13.0
13.05
13.06
8 9.
5 8
3 0
8.
21.

fwd 9.4
8 Dec

Nautical Diary and Day's Work Book. "Dirigo" from Hong Kong to Hilo

9th Week.] WEDNESDAY, 26TH FEBRUARY, 1902. 33 day at Sea. [57-308.]

NAUT. EPHEMERIS,	Sun's Declination, decreasing,	Mean Noon, S 8° 57′ 20″ / Appt. Noon, S 8 57 8	Var. 1 Hour, 55·87″	Equation of Time, decreasing: Sub. from Mean Time, 13m 11·79s. / Add to Appt. Time, 13 11·70	Var. 1 Hour, 0·412s.	Sun's Semi-Diam., 16′11″	Sidereal Time, 22h 21m 35·62s.

The first and middle part of this day light baffling airs. Calm's Smooth Sea And pleasant Weather.

Lattes part fresh breeze from N N E passing clouds

Lat. by Obs., 22° 04
Long. by Obs., 114 54
Course by Obs., ~~S 75 E~~
,, by D. R.,
Distance by Obs., 61
,, by D. R.,
,, by Log, ~~74~~
Current.
Var. used, 20 W.
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

31. on Log

9th Week.] THURSDAY, 27TH FEBRUARY, 1902. 34 day at Sea [58-307.]

NAUT. EPHEMERIS,	Sun's Declination, decreasing,	Mean Noon, S 8° 34′ 55″ / Appt. Noon, S 8 34 43	Var. 1 Hour, 56·19″	Equation of Time, decreasing: Sub. from Mean Time, 13m 1·62s. / Add to Appt. Time, 13 1·52	Var. 1 Hour, 0·435s.	Sun's Semi-Diam., 16′10″	Sidereal Time, 22h 25m 32·18s.

This day comes in with a fresh breeze from N N E

Middle part wind unsteady wore Ship Twice. Wind shifting from North to East then back again

Lattes part Light Unsteady winds fair Weather Wore Ship to North at 11. am.

5 on Log at Noon

Lat. by Obs., 21° 60
Long. by Obs., 120·00
Course by Obs., S 75 E
,, by D. R.,
Distance by Obs., 63
,, by D. R.,
,, by Log, 74
Current. 2 W
Var. used, 5° E
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Hong Kong to Hilo

9th Week.] FRIDAY, 28TH FEBRUARY, 1902 36 Days at Sea [59

NAUT. EPHEMERIS, { Sun's Declination, decreasing, | Mean Noon, S 8° 12' 23" / Appt. Noon, 8 12 11 | Var. 1 Hour, 56·50″ | Equation of Time, decreasing, Sub. from Mean Time, 12m 50·90s. / Add to Appt. Time, 12 50·80 | Var. 1 Hour, 0·458s. | Sun's Semi-Diam., 16′ 10″ | Sidereal 22h 29m

The first part of this day frequent Squall's. first from ESE then from North Calm during the interval. and very heavy overfalls. Ship steering in all directions Middle part light baffling airs. Latter part light breeze from NNE at daylight Sighted the ~~Formosa~~ Island a Cearny East 10 am Sighted SW Cape of Formosa E by S½ S Light NNE airs pleasant Weather

42 on Log at noon

Lat. by Obs., 21
Long. by Obs., 12
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

9th Week.] SATURDAY, 1st MARCH, 1902 (St. David). 37 days at Sea [60

NAUT. EPHEMERIS, { Sun's Declination, decreasing, | Mean Noon, S 7° 49' 43" / Appt. Noon, 7 49 31 | Var. 1 Hour, 56·79″ | Equation of Time, decreasing, Sub. from Mean Time 12m 39·66s. / Add to Appt. Time, 12 39·56 | Var. 1 Hour, 0·479s. | Sun's Semi-Diam., 16′ 10″ | Sidereal 22h 33m

First part of this day light airs and calms S W Cape of Formosa bearing East 18 miles Middle part obreeze came from ESE. after washing a mizzle 5 got in the first time we have to go ~~N~~ South. 4. am were ship to North arned E by E.

8 am Wore ship to SE

This day ends with strong breeze from ENE Ship heading SE. and making a south course

heavy tide rips We have been 37 days and it looks as if we will be a month more.

5 on Log

Lat. by Obs., 21°
Long. by Obs., 120.
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

8, 31, W 32, Sun
42, 5·2, 20 = 31, 12
4 30 9
12, 47, 50, 31, 21
22, 10
98 24
151 55
75 57
31·21
44·36
.0 33, 33
.0 04 48
4.3 85 19
4,844 43
5, 2, 48 65
20, 33, 35
12 55
20, 48 30
12 47 50
8 00 40
120. 10
7
120 17
H.10, alt 58, 12

12. 53, 03 = 31, 21
H.20 alt 58, 02

time H.30 alt 59°42'-11-40 alt c

8. 12. 11
7 24
8. 19 35
90 4.30
98 24 05
12, 50. 80
5 02
12.55
89. 50
39 33
30 17
8 20
27.57

8, 29, W, 88, Sun
12, 48, 00, 30, 40
4 30 9
12.43 30 30·49
21·40
98·01
150 30
75.15
30,49
44.26
.0 31 82
.0 04 26
4.4 05 86
4 84 51 3
5.2 87 09
20, 31, 08
12 44
20 43 32
12 43 30
8.00 22
time 11.10 = alt 5°8°12

12 48, 82, 80, 47
4 30 9
12-44-02-30, 56
21 30
98.01
120,03 7 150 27
75·13
120° 10' 30,56
4 4 17
.0 30 63
.0 04 26
4.4 06 62
4.84 39 4
5.2 85 69
20, 31, 31
12 44
20, 44 15
12 44 02
8, 00 13
time 11-20 = alt 5°8.02

12, 27, 48, 26, 24
4 30 8
12, 23, 18 26 32
21, 30
120,06 7 98.07
146 03
120, 13 73 01
26 32
46 29
.0 30 63
.0 04 26
4.46 5·32
4.86 0 44
5.3 60 85
20, 11, 00
12 44
20 23 44
12 23 18
4 00 24
time 11-30 = alt 5°9°42'= 11-40

7. 49. 31
7 24
7. 56. 55
80 4 30
98 01 25
12.38.54
5.
12.44+
89 50
40 37
29 13
7 37
21, 16
alt 60, 15

4.35W 25 Log

20, 5-6 48-15.43
4.30 4

20, 52-14-15.48
21,00
97 34

105-45 134,23
14 4 67,11
119.31 15,49
31,22

.0 2 9 8 5
.0 0 3 8 0
4,5 8 8 5 9
4,8 9 2 7 4
5,3 1 4 9 8

4, 39, 09
24 12 30
28 51 38
20 32 18
7 58 21

7.31.W. 9.5; Log

11.50.22 = 18 07
4 30 8

11-45-5-2 = 18, 15-
21,25
97 39

105-30 137 19
14 14.30, 68 39
119.44.30 14 15
50.24

.0 3 1 0 7
.0 0 3 8 8
4,5 6 1 1 8
4,8 8 6 7 8
5,4 8 2 9 1

18, 32 18
12 32
19 44 50
11 45 5-2
7 58 58

8.08.W = 98. Log

12.27, 14, 26, 18.
12

SW 25
SSW

						N
			40			
		29				
		54,2		84		
			14,6			
				111		
		140				E
		5 5				
		80				
		13				
		8 8				
		1 5				
				74		
					22,2	W

7.46.W. 78 Log

12,04,44, 20,5-8
4 30 8

12-00-14 = 21 04
21 50
97,14

105-15 140 12
14 7 70 04
119.22 21.04
49.00

0 3 2 8 3
0 0 3 5 0
4,5 3 1 8 4
4,4 7 7 7 8
9,4 4 5-5 7

19, 44, 5-6
12 23
19, 37 21
12 06 14
7 37 07

12, 05, 27, 21, 08
4, 30 8
12-00-57 = 21, 16
22,06
97,16

105-15 140 38
14 7 70 19
118, 22 21 16
4 49,03
119,14

,0 3 3 1 4
,0 0 3 5 0
4,5 2 7 4 0
4,8 7 8 1 1
5,4 4 2 1 5

19, 46, 02
12 22
15 58 27
12 00 57
7, 57 30

119, 45 21,19
119 18 2213
27 - 34

Dep. Lat
23, 5-6
N 24°W 42

7.26.W = 97.14 Log

7 37
50 4
97,38
12 27
5-
12 32

89 5
60 5
28 5-
7 3

21, 1

7.03.
7.6
7.11.
50 5
97.16.

12,16.
5 3
12,21.
4
12 24 5

89 57
60 24
28 26
7 11
22 13

Nautical Diary and Day's Work Book. "Dirigo" from Hong Kong to Hilo

10th Week.] Sunday 2ND MARCH, 1902 (3rd Sunday in Lent). 38 days at Sea [61-304.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 7° 26' 56" / Appt. Noon, 7 26 45 } Var. 1 Hour, 57·07" | Equation of Time, decreasing, Sub. from Mean Time, 12m 27·91s. / Add to Appt. Time, 12 27·81 } Var. 1 Hour, 0·500s. | Sun's Semi-Diam., 16' 10" | Sidereal Time, 22h 37m 21·83s.

This day comes in with fresh breeze and high Seas. at 4.0m Wore ship to North and W.N.W. The Ship has been heading S.E. and going through the waters five miles per hours. since 8 am eight per longitude at 4.0m eight the Longitude was the Same Patent only made a South course. We stood to the North heading N.E making that course good with a strong breeze carrying reefed T.G. gallant sails. at eight this am I found the Ship had gone to leeward 28 miles. We have sailed through a succession of overfalls and tide rips. At 8 am blowing a hard gale with heavy squalls had to reef down fore & aft heavy Sea running and tossing the Ship about like a foot ball. We will get out of the China Sea when the monsoon changes.

Allowing a liberal leeway on course steered. We have had 40 miles WSW current during the day

10 on Log

Lat. by Obs., 21°19
Long. by Obs., 119°45
Course by Obs., West 26'
,, by D. R.,
Distance by Obs., 26
,, by D. R.,
,, by Log, 105
Current. 40' WSW
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

10th Week.] MONDAY, 3RD MARCH, 1902. 39 day at Sea [62-303.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 7° 4' 3" / Appt. Noon, 7 3 52 } Var. 1 Hour, 57·33" | Equation of Time decreasing, Sub. from Mean Time, 12m 15·68s. / Add to Appt. Time, 12 15·58 } Var. 1 Hour, 0·519s. | Sun's Semi-Diam., 16' 9" | Sidereal Time, 22h 41m 18·39s.

This day begins with a Strong gale from E.N.E. Hard Squalls and high Seas

At 4. Pm were Ship 15 N.N.E. Ship under single reefs fore and aft

Middle part more moderate turned out the reefs and set reefed T.G. gallant sails

Latter part Moderate

Ship has headed N.N.E good things the night and we have made a N.N.W. Course. We have had at least 40. Miles W.S.W. current. The Ship is getting foul there is a great difference in her Sailing since we went into Hong Kong We have to wash Ship every time and we lose a lot in doing it. The log will register from one to two miles from the time we keep it until we get up to the wind on the other tack.

87 Log

Lat. by Obs., 22°15'
Long. by Obs., 119°18'
Course by Obs., N 22°W
,, by D. R.,
Distance by Obs., 62'
,, by D. R., 77
,, by Log, 77
Current, 46° WSW
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Hong Kong to Hilo

10th Week.] TUESDAY, 4TH MARCH, 1902. 42 day at Sea [6

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 6° 41′ 4″ / Appt. Noon, 6 40 53 } Var. 1 Hour, 57·58″ | Equation of Time, decreasing, Sub. from Mean Time 12m 2·99s. / Add to Appt. Time, 12 2·88 } Var. 1 Hour, 0·539s. | Sun's Semi-Diam., 16′ 9″ | Sidereal Time 22h 4

This day comes in with light ENE airs. At noon Was ship S 88 E, Wind very unsteady At 4 Pm I found we had drifted ten miles west since morning observations were taken at 8 am. During the middle part a light air struck but from NNE which increased to a fresh breeze towards the latter part of the day

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

41 Lgs.

10th Week.] WEDNESDAY, 5TH MARCH, 1902. 41 day at Sea [64-3

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 6° 17′ 59″ / Appt. Noon, 6 17 48 } Var. 1 Hour, 57·80″ | Equation of Time, decreasing, Sub. from Mean Time 11m 49·84s. / Add to Appt. Time, 11 49·73 } Var. 1 Hour, 0·557s. | Sun's Semi-Diam., 16′ 9″ | Sidereal Time 22h 49m 1

This day comes in with a Moderate Breeze from North at 8 Am made the Island of Tormora. At dark the SW. point bore E by N dis about 20. miles. At 10 Pm the ship was struck by a very heavy squall from NE. we had all we could do to get sail off the ship, during the middle part blowing a heavy gale with high sea. This is the third time that we have been within a short distance of getting out clear of the Bashus and have been driven back. It blowed so hard for a few hours last night the Stm would not lay to the wind; It is hard work but we are only getting what I felt sure of before leaving Hong Kong

25 Lgs

Lat. by Obs., 20.
Long. by Obs., 120
Course by Obs.,
,, by D. R.,
Distance by Obs., 7
,, by D. R.,
,, by Log, 8
Current. West 3
Var. used,
Dev. used,
Wind, Direct, NE
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

6, 5-8 W. 11. Lgs

11, 21, 05 :: 11, 34
4 30 4
11. 14. 34 = 11, 40
22.10
96.53
130 43
65 21
11.40
53.41
.0 33 35
.0 03 14
4.6 20 21
4.9 06 20
9, 54 290
19.02.25
12 08
19 14 33
11 11 34
7.37.59
105 15
14 13
119.30

12. 32. 15. 27, 21
4 31 9
12-27-44 = 27 30
22 20
96 53
146 43
73 21
27 30
45.51
.0 33 46
.0 08 14
4.45-716
4,85-5-83
9.34999
20.14.35
12 8
20 24 43
12 27 44
7 38 59
105 30
14 13
119.43
24
128.19

8.11.W - 18. Lgs

12.33.14 = 27.36
4 31 9
12.28.43 = 27.45
22.10
96.53
105 30 146 48
14 6 73 24
119.36 27.45
24 45 39
120.00
.0 33 35
.0 03 14
4.45 5 89
4.85 4 36
9.34674
20.15.00.
12 8
20.27.108
12 28 42
7.58.26

6.40.53
7 34
6.48 27
56.48 8
54.53 05

12,02,88
5 00
12.7.48
8 8 50
6 0 52
2 8 58
6 48
22,10

6, 49, W 8. Lgs

12.05.39 - 22.48
4 30 8
12 01 09 225 6
4, 9, W, 40, Lgs
28 - 25.28. 22.33
4 30 8
20.20.39 22,41
20,42
4, 11, 20 96,20
24, 11 5-2 139 43
28 23 12 69,51
20,20 38 22,41
8 02 13 47,10
120.33 0 28 98
,00266
4,5-371 6
4,86 5-30
9,43410

12,08.37 = 23,28
4 30 8
12-04-07 = 23-37
21,10
96,20
120 15 141 14
6 70 38
6 23 37
120 24 47.01
.0 30 34
.0 02 76
4.5-2 0 63
4.86 4 25
9,41798
19.53.38
11 5-4
20 03 32
12 4 02
8.1.25

20.12.35. 25.26
4 30 8
20.08.05 = 25 34
20,46
96,20
120.32,30 142 34
71 14
25,34
45,44
,0 28 98
,0 02 66
4,5-05-98
4,85-499
9,99259
3. 6-4.23
24 11 5-2
28 10 13
20 8 02
8. 2 10

6.17.18
7 24
6 24 42
50 4 23
56 28

11.49.43
5-
+11.34
8 9 30
6 2 30
2 7 20
4 23
20,55
+3

Nautical Diary and Day's Work Book, "Dirigo" from Hong Kong to Hilo

10th Week.] THURSDAY, 6TH MARCH, 1902. 42 Days at Sea [65-300.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 5° 54′ 49″ / Appt. Noon, 5 54 38 } Var. 1 Hour, 58·01″ | Equation of Time, decreasing, Sub. from Mean Time 11m 36·26s. / Add to Appt. Time, 11 36·15 } Var. 1 Hour, 0·574s. | Sun's Semi-Diam., 16′ 9″ | Sidereal Time, 22h 53m 8·04s.

This day comes in with strong E.N.E. winds with heavy squalls at 6 P.M. wore ship to North

During the middle part. heavy squalls of wind and rain with intervals of an hour between these and not much wind during the intervel

At daylight made the South point of Formosa bearing N.E. dis. 25 miles

6. A.M. wore ship to S.E.

During the remainder of the day squally variable winds with rain showers heavy overcast with occasional breaks in the Cloud's

Lat. by Obs., 21°10
Long. by Obs., 120°14
Course by Obs., N 29 W
,, by D. R.,
Distance by Obs., 20
,, by D. R.,
,, by Log, 17
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

2 on Log

10th Week.] FRIDAY, 7TH MARCH, 1902. 43rd Day at Sea [66-299.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 5° 31′ 34″ / Appt. Noon, 5 31 23 } Var. 1 Hour, 58·21″ | Equation of Time, decreasing, Sub. from Mean Time, 11m 22·27s. / Add to Appt. Time, 11 22·16 } Var. 1 Hour 0·591s. | Sun's Semi-Diam., 16′ 8″ | Sidereal Time, 22h 57m 4·59s.

Throughout this day Wind and Rain squalls without much wind between the squalls. Wind shifting from E.N.E to E.S.E

at midnight wore ship to N.N.E at daylight saw South Cape of Formosa bearing N.E, at 10 am the light house in sight Volt Rett Rocks bearing E.N.E. dis 6. miles. Wore ship to South

Ship is a fine position for the usual winds

but we have got it so we have to go on a leaving tack. I have got a little courage left and hope to get out into the Pacific some day

S.T. Log

Lat. by Obs., 21° 36
Long. by Obs., 120° 50
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log, 95
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Hong Kong to Hilo

10th Week.] SATURDAY, 8TH MARCH, 1902 44 day at sea [67-298.]

NAUT. EPHEMERIS,	Sun's Declination, decreasing,	Mean Noon, S 5° 8′ 15″ / Appt. Noon, 5 8 4	Var. 1 Hour, 58·39″	Equation of Time, decreasing, Sub. from Mean Time, 11m 7·88s. / Add to Appt. Time, 11 7·77	Var. 1 Hour, 0·608s.	Sun's Semi-Diam., 16′ 8″	Sidereal Time, 23h 1m 1·15s.

This day comen mi with fresh breeze from East with rani Squalls

Was Ship 15 Nt at midnight at day light saw the light house on the South Cape of Formosa Bearing NNE. did not see the light although it was clear

Vele Rete Rocks NW six miles

at noon Sw cape pen SWbW and Botel Tobago EbN

We have had a two Knott current setting NW since day light

We are ten miles off the land wind very light and baffling and drifting to the NE. with the Japan Stream

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

13 on Ley

11th Week.] Sunday, 9TH MARCH, 1902 (4th Sunday in Lent). 45 day at Sea [68-297.]

NAUT. EPHEMERIS,	Sun's Declination, decreasing,	Mean Noon, S 4° 44′ 51″ / Appt. Noon, 4 44 41	Var. 1 Hour, 58·55″	Equation of Time, decreasing, Sub. from Mean Time, 10m 53·11s. / Add to Appt. Time, 10 53·00	Var. 1 Hour, 0·623s.	Sun's Semi-Diam., 16′ 8″	Sidereal Time, 23h 4m 57·70s.

This day begin with light breeze from E.S.E at 2.Pm Made the Island Samasana bearing NE.½N.

Our breeze failed us and we drifted up inside of the Island and all night had a succession of squalls of wind and rain. The Island is 54 miles off the east of Formosa. Owing to the Light and the squalls kept us from all quarters

All hands were on deck all night handing the Yards around.

At day light we were six miles off the Black Rocks We got a little puff off the land and got an offing

The day ends with baffling winds and calms

We are three days Sail from Hong Kong

23 Ley

Lat. by Obs., 23°07
Long. by Obs., 121.48
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Y.53.W. 88. Log-

12.10.18. 24.49 12.10.57. 24.56

4 32 6

12.6.25 = 25.07
21 41
95.26
120 45 142 04
11 71 04
120.34 23.07
11 45.57
121 07
2131 .0 3 1 87
0 01 88
4.5 1 1 17
4.8 5 4 5.7
5.4 0 1 4 9
19.5 8 5.4
1 1 1.3
20 10 07
12 6 25
8. 3 42

E by N

57.08.4
7.49
5. 13 53
90 4
85.19.53
11.04.77
5
11-13
89.49
42 35
27 14
5 16
21.58
41
19

4

4 Pm Were Ship's Day on Day

89.50
62.34
27.16
4.28
22.47
12
35

20,27, 123,20
18 19
20.09 123,39

S 84° E. @ 7, 24. Am
True N 103° 02 ' E
Sun True bearg N 107° 08 '
" Comps. " 109.00 E
Error 2° W

180
84
96

180
71
109

89 50
60 45
29 05
4 05
25 00
1 24
23 34

4, 21, 14
4 29 05
50 3
54.34
10.37,84

88 49
62 33
26 16
4 28
22,27

6.40.W. 21 Leg.
10.47.00. 8.20

7. 23., 13 = 33,
7, 24.13 - 33.40

7.36.W
11,42,24 = 20,48
4 32
11.37,52. 20.56
23.15
94.16
138 21
69.10
20.56
48.14

.0 3 4 7 8
.0 0 1 1 6
4.5 5 1 0 2
4.8 7 2 4 4
5.4 6 1 6 1

18.39.86
10.21
18.49.5.7
11 37 32
8 12 05

123.07

7.37.W. 24 Leg
11.45.03 20.57

7, 22, 31, 33.59
3.21 W 62. Leg
7, 25.02, 33.30
4.32
7,20,30 = 33,38
23.50
54.00

3,32.08.
24 10 23
27 42 33
18 20 30
4 22 03

15-1 29
75 44
33.39
42 05

.0 8 0 5 8
.0 0 1 0 6
4,38170
4,82421
5,29955

3, 5-7,
4
4,0 5-
20
9.4 = 10

10,22,
5-
10,28.
3
10.21

88 4
62 2
27 3
4
23.3
1
23 3

Nautical Diary and Day's Work Book, "Dirigo" from Hong Kong to Hilo

11th Week.] MONDAY, 10TH MARCH, 1902. 46 Day's at Sea [69-296.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 4° 21' 24" / Appt. Noon, 4 21 14 } Var. 1 Hour, 58·69" | Equation of Time, decreasing, { Sub. from Mean Time 10m 37·97s. / Add to Appt. Time, 10 37·86 } Var. 1 Hour, 0·638s. | Sun's Semi-Diam., 16' 8" | Sidereal Time, 23h 8m 54·25s.

This Day begins with light baffling winds and mist squalls
4. Pm Strong squally breeze from N E. Overcast and Rainy
Middle part strong breeze clear weather
Latter part Overcast with frequent mist squalls
fresh unsteady breeze
Ship under Reefed T'gallant Sails

Lat. by Obs., 22° 27
Long. by Obs., 123° 20
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log, 106
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

33 cn. Leg

11th Week.] TUESDAY, 11TH MARCH, 1902. 47 days at sea [70-295.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 3° 57' 54" / Appt. Noon, 3 57 44 } Var. 1 Hour, 58·82" | Equation of Time, decreasing, { Sub. from Mean Time, 10m 22·49s. / Add to Appt. Time, 10 22·37 } Var. 1 Hour, 0·652s. | Sun's Semi-Diam., 16' 7" | Sidereal Time, 23h 12m 50·80s.

This day comes in with fresh N E Winds. Weather overcast
At 4. Pm Were Ship to N N W
Middle part Moderate and Rainy more to Eastward
Latter part Moderate Breeze Overcast

Lat. by Obs., 23° 32
Long. by Obs., 123° 04
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

44. Leg

Nautical Diary and Day's Work Book, Hong Kong from to Hilo

11th Week.] WEDNESDAY, 12TH MARCH, 1902. 48 days at Sea [71-294.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 3° 34′ 21″ / Appt. Noon, 3 34 11 } Var. 1 Hour, 58·93″ | Equation of Time, decreasing, Sub. from Mean Time, 10m 6·66s. / Add to Appt. Time, 10 6·55 } Var. 1 Hour, 0·666s. | Sun's Semi-Diam., 16′ 7″ | Sidereal Time, 23h 16m 47·36s.

This day comes in with a Moderate breeze from East
6 PM Sighted the Island Jima Bunga bearing NE.
Middle part light
breeze continual rain
at daylight
clear with patchy clouds
Hopkin-su in sight bearing E. N.E
This day ends with a fresh breeze from SSE. Ship is so foul she is only making six knots. She ought to be going nine.
Hopkin-Su bearing S by E 20 miles

75 on Log

Lat. by Obs., 26° 0′
Long. by Obs., 123° 2′
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

11th Week.] THURSDAY, 13TH MARCH, 1902. 49 day's at Sea [72-293.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 3° 10′ 45″ / Appt. Noon, 3 10 35 } Var. 1 Hour, 59·02″ | Equation of Time, decreasing, Sub. from Mean Time, 9m 50·52s. / Add to Appt. Time, 9 50·41 } Var. 1 Hour, 0·679s. | Sun's Semi-Diam., 16′ 7″ | Sidereal Time, 23h 20m 43·91s.

This day begins with a fresh breeze from SSE.
at 3 PM. had a heavy squall of rain Thunder and lightning the rain fell in torrents. after it was over we were becalmed with the exception of cats paws until 8 am then a light breeze came from North which increased to a breeze towards noon
We are in the heart of the Japan Stream but do not find it helping us much
the Ship is so foul that she will not steer or sail a few more days in the China Seas and we ourselves will have been able to do any thing with her

25 on Log

Lat. by Obs., 26° 37′
Long. by Obs., 124° 2′
Course by Obs.,
,, by D. R.,
Distance by Obs., 65
,, by D. R.,
,, by Log, 60 G. Miles
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

7.52.W. 50.Lg.

11.57.58. 23.38
4 33 9
11-53 25= 23.47
25.46
93 47
120.45 143 20
2 10 71 40
122.55 23.47
22 47.33
17
122. .045-48
.00095
4.49768
4.87028
9.41439
19.54.55
10 11
19 05 04
23 44 11 53 23
24.02 8.11.41

7.55.W.

Y2.01.24.24.23
4.48
8.45.50.13.48
4 33 4
8.41.17= 13 54
24.43
93.15
124.45 133 52
4 64.54
124.49 13 54
3 9.02
.04903
.00070
4.59307
4.90254
9.54534
4 50.40
24.8.52
29 00 32
20 41 17
8.19.15

8.09.35 22.56
4 32 9
7.59.03. 23 07
24.43
93 15
143.05
71 32
23.07
48.23
.04903
.00070
4.50073
4.87390
9.42436
4.08.13
24. 9 52
28 18 05
19 39 03
8.19.2
120
4 43
124.45

3,34,11
4
3 42 11
50 5
93 47

10.04.55
5
10, 11

8950
4000

29 50
3 42
26,04

7.30.W. 12. Lg

11.35.08. 18.49
4 33 8
11.30.36. 19 57
26.37
93.23
120 139 57
4.06 69 54
124.06 19 37
13 30.01
124.19
.04845
.00076
4.53475
4.88436
9.46832
18. 37.16
8 52
18 44 08
11 30 36
8 16 22

11.35.46. 19.57

Sights Taken 27°3rd 3°S.Dec
Sights Taken bearing N 97° 14′ E
" Compass " N101° 00 E
Comp. Error. 3°44′W

24.37. 124.19
25 19
27.62 125.28

4.5.W. 42 Lg.

8.03.04= 23.03
4 33 8
7.58.31= 23.11
24.43
93.15
143 08
71 34
23.11
48.23
.04803
.00070
4.49946
4.87336
9.42336
4.04.54
24 9 52
28 17 46
19 38 31
8.19.15

124.50

3,10,35
7 40
3 18,15
90. 4 30
93,22,45

9.50.41
5-18
9.35.59
3
X5-57

89-57
5-9 33
25 55
3 18
24,37

S.01.W. 99.

11.52.05. 24.45
4 33 S
11.47.32 = 24.54
27.00
S2.39
144.53
72.26
24.54
47.32

.05012
.00059
4.47974
4.86784
S.39831

18.58.47
S 41
20.08.28
11 47 32
8 21 56

123 15
14
125.29

11.52 47. 24.59
4.33 S
11.48.14 = 25.02
24.58
S2.59
144 59
72 29
25.02
47.27

120 15
5 11
123.26

.04999
.00059
4.47854
4.86724
S.39640

20.00.18
S 41
20.08 59
11 48 14
8.21 45

4.1 W
7.52.45 - 24.47
4 33 S
7.48.12. 24.56
27.04
S2.59
144 58
72 29
24 56
47 33

.05038
.00059
4.47854
4.86798
S.35749

3.58.52
24.935
28.09 37
19 48 12
8.21.25

8.14
7 52
22

4.22
1
4.21

6.10.am 28° Sat 3° dr
Sun's T. Bearg N.83.W.E
" Comp. " N 87 00 "
Error W 4°00 W
Var as per chart W.2°00 W
Dev. on NE. W.2°00 W

89 50
59 00
30 50
2 29
24

28.07. 126.06
27 2 125 24
5 40

Lost Dist
65 = 35

N 28 E 74. miles

T. W. 37. Log.
10.50.51. 11.44
10.31.24. 11.50
4.33 6
10.44.51. 11.56
27.40
S2 32
132 08
66.04
11 56
54 08

.05273
.00042
4.60818
4.90869
S.57002

18.58.03
S 24
19 08 29
10 46 51
8.21.38

7.25. W. 39. Log
11.14.24 17.04
11.14 43 17.08
4 33 7
11.10.10. 17.16
27.54
S2 32
137 42
64.51
17.16
51.35

.05346
.00042
4.56728
4.89405
S.50541

18.24.18
2 24
19 38 44
10 10 10
8 23 34

12 dell 10.08

2.28.1
7.4
2.48.5
50 49
S2.32.2
9.17.2
5
S. 22.4
3.5
S. 26.
88 52
58 12
30 3
2 3
28.0

24.

54. Log

Nautical Diary and Days' Work Book, "Dirigo" from Hong Kong to Hilo

11th Week.] FRIDAY, 14TH MARCH, 1902. 50 day's at Sea [73-292.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 2° 47' 7" / Appt. Noon, 2 46 58 } Var. 1 Hour, 59·10″ | Equation of Time, decreasing, Sub. from Mean Time, 9m 34·08s. / Add to Appt. Time, 9 33·97 } Var. 1 Hour, 0·691s. | Sun's Semi-Diam., 16′ 6″ | Sidereal Time, 23h 24m 40·46s.

The first part of this day we had a light breeze from North, clear pleasant weather.

During the middle part it backed to NNE at 4. am. wore ship to NW.

At 7. Pm. Steam ship passed close to and bound NE.

Day Ends with light airs from NNE
Clear pleasant Weather
Current very light if any

2 on Log

Lat. by Obs., 27·02
Long. by Obs., 125°·24
Course by Obs., NS9°·E
,, by D. R., 66
Distance by Obs., 68
,, by D. R.,
,, by Log, 79
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

11th Week.] SATURDAY, 15TH MARCH, 1902. 51 day's at Sea [74-291.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 2° 23' 28" / Appt. Noon, 2 23 18 } Var. 1 Hour, 59·16″ | Equation of Time, decreasing, Sub. from Mean Time, 9m 17·35s. / Add to Appt. Time, 9 17·24 } Var. 1 Hour, 0·703s. | Sun's Semi-Diam., 16′ 6″ | Sidereal Time, 23h 28m 37·01s.

All the first part of this day the ship did not have steerage way. Toward midnight a light breeze came from South

Middle and latter part Moderate breeze from South, pleasant Weather

54. Log

Lat. by Obs., 28°·07
Long. by Obs., 126°·06
Course by Obs., N 28°·E
,, by D. R.,
Distance by Obs., 74
,, by D. R.,
,, by Log, 60
Current. 14.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30·
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Hong Kong to Hilo

12th Week.] Sunday, 16TH MARCH, 1902 (5th Sunday in Lent). 52 days [75-290.

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 1° 59′ 47″ / Appt. Noon, 1 59 38 } Var. 1 Hour, 59·21″ | Equation of Time, decreasing, Sub. from Mean Time, 9m 0·35s. / Add to Appt. Time, 9 0·25 } Var. 1 Hour, 0·713s. | Sun's Semi-Diam., 16′ 6″ | Sidereal Time, 23h 32m 30·12s.

Throughout this day Moderate Breeze hazy weather

95 Miles NE Current

at noon hauled up and tried to get out through the Lisianski Island but the wind headed the ship off and the current drifted us out of our position

5-3 on Log

Lat. by Obs., 29.1
Long. by Obs., 124.
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

12th Week.] MONDAY, 17TH MARCH, 1902 (St. Patrick). 53 day [76-289.

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, S 1° 36′ 5″ / Appt. Noon, 1 35 57 } Var. 1 Hour, 59·24″ | Equation of Time, decreasing, Sub. from Mean Time, 8m 43·11s. / Add to Appt. Time, 8 43·00 } Var. 1 Hour, 0·723s. | Sun's Semi-Diam., 16′ 6″ | Sidereal Time, 23h 36m 30·12s.

This day comes in with light Breezy Weather hazy Wind SE by E Stood in and sighted the islands. At noon Hebi bore E½N 6 miles five others in sight

90 Miles NE current

52 on Log

Lat. by Obs., 29°52
Long. by Obs., 125.2
Course by Obs., N
,, by D. R., 70
Distance by Obs.,
,, by D. R., 10
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

6.34 W. 27 Sy
10.27.57 8.38
2.43.W.
10.34.50. 10.08
4 34 6
10 30 16 10.14
28.50
92.12
131 16
65 38
10.14
55 24
.0 5 7 4 8
.0 0 0 3 2
4.4 1 5 5 0
4.4 1 5 4 7
9.5 8 8 7 7
18.51.48
9 15
1 8 0 1 0 3
10 30 16
4 3 0 4 8
120 30
7 12
127.42

7.33.W 31 Sy
11.15.35 18.48
11.22.15 20.15
8.39.W 36 Sy
12.22.53 = 32.50
12.23 17 = 32.56
4 34 10
12.18.43 = 33.06
29.11
92.12
120 45 154 29
7 13 7 7 14
127.58 33.4
16 44.08
128.14 .0 5 8 9 5
.0 0 0 3 2
4.3 4 4 3 4
4.8 4 2 8 2
9.2 4 6 4 5
20.41.20
9 15
20 50 35
12 14 43
8.31 5-2

7.43 W 32 Sy
11.25 31. 20.5 9
11 26 08. 21.07
4 34 8
11 21-34 - 21.15
28.11
92.12
142 38
7 1 8
21.15
50.04
9.5 8 9 5
.0 0 0 3 2
4.5 0 5 4 1
4.8 8 4 4 8
9.4 4 9 5 6
18.43.37
9 15
18.52 52
11 21 34
8 31 18
120 45
7 4
127.49

1.5 9.38
7 40
2.07 18
50 4 30
52.11.42
9.06.25
5 18
9.11 43
3 00
49-15
8950
5824
31.26
2 07
29.18
9

6.40 W. 25 Sy
10.27.00. 9.46
10.27 34. 9.59
4 34 5
10.23.43. 10.04
28.18
91.48
120 131 12
9.04 45 34
129.04 10 04
55.32
.0 5 9 5 2
.0 0 0 2 2
4 6 1 6 0 4
4.9 1 6 1 7
9.5 9 7 9 7
18.60.27
8 53
14 59 20
10 23 3
8 36 17

7.24.W 28 Sy
11. 10.03. 19.04
11.10 40. 19.12
4 34 8
11.06.06 19.20

1.35 5-7
8 30
1.44.27
50 5-00
51-49.27
8.49.00
6 30
8.49.30
3 36
8.53
8950
5814
3136
144
29.52

8948
58 2
3146
56
30

19-26-12 24-52
19-25-56 24-42

33,58,W 39.4
19.26.56. 24,42
4 35 8
18 22 21 24 51
31.00
90.57
144 42
7321
2451
4830

.06683
.00005
4.45-714
4.87446
5.39860

14.00.12
24 8 11
28 08 23
18 22 21
8 46 02

120 30
11 1
131.31

7. 37. 54 = 22,23
4 36 8
7.33.22 = 22 38
31,00
90,57
144.24
72.12
22.33
48.38

.06683
.00005
4.48529
4.88201
5.43428

4. 11. 23
24 8 11
28 19 34
18 33 22
9 46 12

120 30
11 3
131.33

7. 33. 22. 22,33
30.53
90.57
144 18
72,09
22,33
48.34

,06493
60003
4,48447
4,88169
5,43514

4.11.40
24 8 11
28 19 51
19 33 22
4.46 29

120 30
11 7
131.37

00.48.32
8
56

00.48.24
8 00
00 54 24
50 4 24
50 51 56

8.07.86
6.00
8.13.86
3 30
8.10 56

89 60
58 0
31 60
60
30 54

Nautical Diary and Days' Work Book, "Dirigo" from ~~Hong Kong~~ to Hilo

12th Week.] TUESDAY, 18TH MARCH, 1902. 54 Day's [77-288.]

NAUT. EPHEMERIS, { Sun's Declination, *decreasing*, { Mean Noon, S 1° 12′ 23″ / Appt. Noon, 1 12 15 } Var. 1 Hour, 59·25″ | Equation of Time, *decreasing*, { Sub. from Mean Time, 8m 25·64s. / Add to Appt. Time, 8 25·53 } Var. 1 Hour, 9·732s. | Sun's Semi-Diam., 16′ 5″ | Sidereal Time, 23h 40m 26·67s.

This day ended with moderate to light Breeze from SE. ~~Hazy~~ weather

4 Pm Sighted Nagasobe Island and passed around the west end at 10 Pm in 6

Non Devinder Singh. Spent the remainder of the day ~~but~~ Rowing Guards in the calms and light airs

day ends with moderate Breeze from ENE.

At noon the Light House on Cape Sata "Japan" bore NNE. 12. miles Tacked Ship to SE.

Lat. by Obs.,
Long. by Obs..
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

16 Day

12th Week.] WEDNESDAY, 19TH MARCH, 1902. 55 day's [78-287.]

NAUT. EPHEMERIS, { Sun's Declination, *decreasing*, { Mean Noon, S 0° 48′ 40″ / Appt. Noon, 0 48 32 } Var. 1 Hour, 59·26″ | Equation of Time, *decreasing*, { Sub. from Mean Time, 8m 7·96s. / Add to Appt. Time, 8 7·86 } Var. 1 Hour, 0·740s. | Sun's Semi-Diam., 16′ 5″ | Sidereal Time, 23h 44m 23·22s.

Throughout this day light baffling winds and Calms

At 8..8m the light on Cape Sata bore W by N 8. miles

by ~~bo~~ hauling the Guards we kept it on that bearing and drifted out through the Strait into the Pacific. At daylight The ~~north~~ point of Tanaga Island bore S by W ½ W dis. 4 miles. at noon we had drifted to the Eastward and the land was not in sight it was Hazy yet we must have drifted 20 miles since daylight. We spent two very anxious nights and one day in the Straits the greater part of the time the Ship not having steerage way. We were close to one Island on fire and the next one to it was covered with snow. We have drifted with the Kuro Siwo Stream since passing the south End of Formosa and the greater part of the time with only wind enough to steer

Lat. by Obs., 31° 00
Long. by Obs., 131.° 34′
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R ,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Hong Kong to Hilo

12th Week.] THURSDAY, 20TH MARCH, 1902 56 Day's [79-286.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, | Mean Noon, S 0° 24′ 58″ / Appt. Noon, 0 24 50 | Var. 1 Hour, 59·24″ | Equation of Time, decreasing, Sub. from Mean Time, 7m 50·11s. / Add to Appt. Time, 7 50·01 | Var. 1 Hour, 0·747s. | Sun's Semi-Diam., 16′ 5″ | Sidereal Time, 23h 48m 19·77s.

Throughout the past twenty four hours light baffling airs and Calms at 8. PM Oshima Light bore N½W. 20 miles at 5. am. the Light bore NNW½W. about 20 miles.

The day ends with a light air from NE The Ship is so foul she does not move through the water We are having a Ascent this Eventfull passage

Lat. by Obs., 31°12
Long. by Obs., 131.55
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

12th Week.] FRIDAY, 21st MARCH, 1902. 57 day's at Sea [80-285.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, | Mean Noon, S 0° 1′ 16″ / Appt. Noon, 0 1 9 | Var. 1 Hour, 59·21″ | Equation of Time, decreasing, Sub. from Mean Time, 7m 32·09s / Add to Appt. Time, 7 32·00 | Var. 1 Hour, 0·783s. | Sun's Semi-Diam., 16′ 5″ | Sidereal Time, 23h 52m 16·32s.

This day begins with light baffling Easterly airs and calms. At 8 PM airs came from South and gradually increased to a moderate breeze Latter part of the day overcast

Signaled a German Steam Ship bound to Yokohama and asked him to report us.

Lat. by Obs., 31°31
Long. by Obs., 132°5
Course by Obs., N66°
,, by D. R., 5·9
Distance by Obs.,
,, by D. R., 41
,, by Log, 10·1
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

H. Loy

7.24.

10.52.05 - 18.00
4 34 8
10.47.29 = 18.08
31 20
50 42
14016
7005
1404
31,57

10646
00005
4.53231
4.89624
8.49704

19.27.09
7 58
19 35 08
10 47 29
8 47 39

120 45
11 4
131.51
131.35

11.08.00 - 21.19
4 34 8
11.03.24 = 21.27
31,12
80,36
143,15
71,37
21 24
30,10

.06785
.00002
4.49882
4.84531
9.45200

19.42.48
7 58
19 30 48
11 03 24
8 47 24

11.08.35 - 21.24

00.24.30
8.00
00 32.30
88 4 24
80 34 14
7.30.07
9
7.58

89 50
58 03
31 45
33
31.12

11.14.56 - 23.26
4 34 8
11.10.19 = 23.34
31,40
80.13
145 27
72.43
23 34
49.09

120.30
12.2
132.32

.07001
.00000
4.47290
4.84477
8.32168

19.52.44
7 41
20 00 25
11 10 18
8 50 07

7.54.W. 84.Dep

11.15.16 - 28.31
4.36 8
11-10.40 = 23.39
31 25
80 13
145 17
72.38
23.39
48 59

120 13
12 11
132.26
24
132.02

.06485
4.47492
4.84764
8.42141

19.52.43
7.41
20 00 24
11 30 40
8 49 44

31.31. 131.5-5
3112 132 5-2
19. 5 7
Var 0.1.
19. 48.2
N 48° 9 -5-2
31.31. 132.5-2
22 1 24
31.53 134.18

00.07.09
8 00
00 0.8.
80 4
80.13
7.32.00
9
7.41

89 50
58 20
31.40
9
31.31

D 9H0

7.46.m. 4. Lat
9. 25. 45. 25. 54
9. 26. 17. 26. 03

31. 56. 134. 18.
1 18 15
30 37 134 33

Nautical Diary and Day's Work Book, "Dirigo" from Hong Kong to Hilo

12th Week.] SATURDAY, 22ND MARCH, 1902. 5 & Days at Sea [281-284.]

NAUT. EPHEMERIS, { Sun's Declination, increasing | Mean Noon, N 0° 22' 25" / Appt. Noon, 0 22 32 } Var. 1 Hour, 59·18" | Equation of Time, decreasing, Sub. from Mean Time, 7m13·94s. / Add to Appt. Time, 7 13·85 } Var. 1 Hour, 0·759s. | Sun's Semi-Diam., 16' 4" | Sidereal Time, 23h 56m 12·88s.

The first part of this day light Southerly winds Hazy
Middle part struggling rain wind unsteady from SSE to VSSW
Latter part rain, quite hards at times
at 11. am. Wind shifted to East more strong to SSE.
Choppy sea and constant rain.

60 on Log

Lat. by Obs.,	31° 55'
Long. by Obs.,	134°18
Course by Obs.,	
,, by D. R.,	
Distance by Obs.,	46.
,, by D. R.,	
,, by Log,	
Current.	
Var. used,	
Dev. used,	
Wind, Direct,	
,, Force,	
Sea,	
Weather,	
Barom.,	29, 82.
Thermom., Air,	
,, Sea,	
Hygrometer,	

13th Week.] Sunday, 23RD MARCH, 1902 (Palm Sunday). 5 & day at Sea [82-283.]

NAUT. EPHEMERIS, { Sun's Declination, increasing | Mean Noon, N 0° 46' 5" / Appt. Noon 0 46 12 } Var. 1 Hour, 59·12" | Equation of Time, decreasing / Sub. from Mean Time, 6m 55·67s. / Add to Appt. Time, 6 55·59 } Var. 1 Hour, 0·763s. | Sun's Semi-Diam., 16' 4" | Sidereal Time, 0h 0m 9·43s.

This day begins with Squalls and rain at 4: Am the wind came from SE. in a heavy squall and ended in a Gale Squalls and rain. Giving a heavy sea with it 11. Am the sea was so heavy & high to beat. the ship before the wind! The heavy sea would come from North. At 5 am the sea being more regular. Hauled the ship on the wind again. Blowing hard, high sea running. Toward the end of the day the weather was more moderate the sea more regular and a strong steady breeze Ships under lower T.G.sails reefed Fores'l and Stay sails

59. on Log.

	D2
Lat. by Obs.,	30. 37
Long. by Obs.,	134. 33
Course by Obs.,	
,, by D. R.,	
Distance by Obs.,	
,, by D. R.,	
,, by Log,	
Current.	
Var. used,	
Dev. used,	
Wind, Direct,	
,, Force,	
Sea,	
Weather,	
Barom.,	29.75.-82
Thermom., Air,	72 [illegible]
,, Sea,	
Hygrometer,	

Nautical Diary and Day's Work Book, "Dirigo" from ~~Hong Kong~~ to ~~Hilo~~

13th Week.] MONDAY, 24TH MARCH, 1902. 60 day's at Sea [83-28

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, } { Mean Noon, N 1° 9′ 43″ / Appt. Noon, 1 9 50 } Var. 1 Hour, 59·05″ | Equation of Time, *decreasing*, Sub. from Mean Time, 6m 37·32s. / Add to Appt. Time, 6 37·24 } Var. 1 Hour, 0·766s. | Sun's Semi-Diam., 16′ 4″ | Sidereal Time, 0h 4m 5·9s

This day comes in with a Strong Gale from NE with high Sea and constant Sleet

At 4 Pm. Wore Ship to NW

Middle part More moderate Main Squalls

Latter part frequent Squalls with not much wind between Squalls of wind and rain.

1 Am Wore Ship to SE.

Wind E & NE.

45 on Log

Lat. by Obs., ~~D.~~ 30°30

Long. by Obs., 138.5

Course by Obs.,

,, by D. R.,

Distance by Obs.,

,, by D. R.,

,, by Log, &c

Current.

Var. used,

Dev. used,

Wind, Direct,

,, Force,

Sea,

Weather,

Barom.,

Thermom., Air,

,, Sea,

Hygrometer,

13th Week.] TUESDAY, 25TH MARCH, 1902 (*Annunciation—Lady Day*). 61 day's [84-281.

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, } { Mean Noon, N 1° 33′ 20″ / Appt. Noon 1 33 26 } Var. 1 Hour, 58·96″ | Equation of Time, *decreasing*, Sub. from Mean Time, 6m 18·91s / Add to Appt. Time, 6 18·83 } Var. 1 Hour, 0·768s. | Sun's Semi-Diam., 16′ 4″ | Sidereal Time, 0h 8m 2·53s

The first part of this day. Wind E N E with squalls of Wind and rain

At 2 Pm. wore Ship to N E. the wind having Veered to S E.

Middle part Moderate with frequent Mist squalls

Latter part Wind unsteady from S E to S S E. Rain squalls

We have had a heavy Sea running from the Eastward throughout the day.

This has probably been the Equinoctial gale.

We have had about all there was to keep us from getting anywhere

25 on Log

Lat. by Obs., 32°03

Long. by Obs., 135°11

Course by Obs.,

,, by D. R.,

Distance by Obs.,

,, by D. R.,

,, by Log,

Current.

Var. used,

Dev. used,

Wind, Direct,

,, Force,

Sea,

Weather,

Barom.,

Thermom., Air,

,, Sea,

Hygrometer,

30.34 134.18
13 34
30 5.0 135 52

3.43.W. 60 Sts
19.00.49. 27,22
4 36 9
18.56.03. 27,31
30 50
88 55
15 7 14
7 4 38
27.31
5 1 07

.0 4 6 18
0 0 0 0 8
4,2 8 4 4 4
4,6 8 1 2 2
8,25.214

120
7.37
127.37

3.20.04
24 6 24
27 26 32
14 54 03
8 30 29

10, Sts 6, 17 W
11. 36. 42. 30.55
4 36 9
11 - 32 - 06 = 31,04
120 45 31,52
1 4 13 88,39
134 58 131 35
13 75 47
135.11 31,04
44,43

.0 7 0 9 5
.0 0 0 1 2
4,3 9 0 2 1
4.8 4 7 3 3
8,30861

20,25.32
6 28
20 32 00
11 32 04
8,59 34

Sts 30
NW jr 55

42.5	29.4	5.9	34.9
42.5			34.9
254		5.5	34.5
131			79.0

89 50
5 8 50
31.30
1 1
32.31

1.9.50
4 36
1. 1 20
4 34
0054 44
90 00 00
84 5 20
90 00 00
84.54.40

4.18.83
6 30
4.25.13
3 30
4.28 43

1:33.20
8 30
1-24-56
3 54
1.21.02
90 00 00
88 38 58

6.18.83
20
6.2.
6 28 43

89 50
58 12
30 38
1 25
32,03
1 1
32

Y, 50, W, 95, Lay

10. 58. 10 = 25. 13.
4.36 &

10. 54. 34 = 25. 21

82.07
88.14

135 2 145 44
2 0.30 72 52
137.02.30 25.21
137 22 47.31

.07213
131 6 00020
4.44823
4.86775
9.40931

18. 54. 30
6 10
20 02 32
10 54 34
9.04 04

137

11.00.14.25.22

0

1.54.
4 3
1.48 3
2 3
1 44 3
90 00
88.15 3

6.00.
10
6.10

89 50
58 32
30 6
1 45
3 20

2.20.3
8.3
2.29.0

89 50
59 42
30 8
2.28
3241

NAUT. EPHEMERIS, Sun's Declination, increasing | Mean Noon, N 1° 56′ 54″ / Appt. Noon, 1 57 0 | Var. 1 Hour, 58·86″ | Equation of Time, decreasing, Sub. from Mean Time, 6m 0·46s. / Add to Appt. Time, 6 0·38 | Var. 1 Hour, 0·769s. | Sun's Semi-Diam., 16′ 3″ | Sidereal Time, 0h 11m 59·08s.

Light breeze & Cloudy all this day
that has Veered all around the
Compass then back again to West
Where it Lookes as if it might remain
a few Hours
the first and middle
part of the day we had fog and
Mist showers
the latter part overcast
with passing clouds fine weather

Lat. by Obs.,	92°07
Long. by Obs.,	137·6
Course by Obs.,	
,, by D. R.,	
Distance by Obs.,	97
,, by D. R.,	
,, by Log,	60
Current.	
Var. used,	
Dev. used,	
Wind, Direct,	
,, Force,	
Sea,	
Weather,	
Barom.,	
Thermom., Air,	
,, Sea,	
Hygrometer,	

96. Lay

NAUT. EPHEMERIS, Sun's Declination, increasing | Mean Noon, N 2° 20′ 26″ / Appt. Noon 2 20 32 | Var. 1 Hour, 58·75″ | Equation of Time, decreasing Sub. from Mean Time, 5 m41·99s. / Add to Appt. Time, 5 41·92 | Var. 1 Hour, 0·769s. | Sun's Semi-Diam., 16′ 3″ | Sidereal Time, 0h 15m 55·63s.

All this day moderate unsteady
breezes from WSW to NNW.
Mist squalls & fog - and clear
Weather part of the time.
We have had
25 Miles Current in our favor
for which we are duly thankfull
at noon Made the Island "Aaga" bearing
E by N dis 25 Miles

77 on Lay

Lat. by Obs.,	92 31
Long. by Obs.,	138·50
Course by Obs.,	
,, by D. R.,	
Distance by Obs.,	125
,, by D. R.,	
,, by Log,	80
Current,	
Var. used,	
Dev. used,	
Wind, Direct,	
,, Force,	
Sea,	
Weather,	
Barom.,	
Thermom., Air,	
,, Sea,	
Hygrometer,	

Nautical Diary and Day's Work Book, "Dirigo" from Hong Kong to Hilo

13th Week.] FRIDAY, 28th MARCH, 1902 (Good Friday). 64 day's [87-27

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N 2° 43' 55" / Appt. Noon, 2 41 0 } Var. 1 Hour, 58·63" | Equation of Time, decreasing, Sub. from Mean Time, 5m 23·53s. Add to Appt. Time, 5 23·46 } Var. 1 Hour, 0·769s. | Sun's Semi-Diam., 16' 3" | Sidereal Time 0h 19m 5

All these Twenty four hours light unsteady breezes from N.W. to N.N.E

At 8. Am Aoga island bore North 8 miles

We are now 64 day's at sea and it has been a very tiring 64 day's for us all. I am about used up both in mind and body. We have been passing over the most windy and dangerous route that could be picked out on the ocean at this season of the year. The ship at the best will not beat to windward in ballast now she is so foul that she will not get out of her own way with a fair wind. We are out clear of all the Islands now and may in time get to Hilo

Wind N.E

70. Log at noon

Lat. by Obs., 32°3
Long. by Obs., 141.3
Course by Obs.,
,, by D. R.,
Distance by Obs., 114
,, by D. R.,
,, by Log, 93
Current,
Var. used, 2/ 5° W
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

7,40, W. 54. Log.

10.38, 27. 24.54
4 36 ☾
10,33,51 = 25,03
32.40
135,45 87.32
5 11 145 15
40.54 72.37
☾ 25.03
141.05 47,34

.0 7 9 7 3
.0 0 0 4 0
4.4 7 5 3 3
4.8 6 8 0 8
9.4 2 3 5 5
19, 52,02
☾ 3 4
19 5 7 3 6
10 3 3 5 1
☾ 23 45

10.29.12 „ 25.05
135

141 05
138 30
2.15

2°41.09"
9.01
2.32.08
4
2.28 08
00 00 00
87.31.32

5.23.40
7.00
5.30.40
3.30
5.34.10

8 9 5 2
4 1 4 0
4 1 3 2 2
2 2 4
3 0

13th Week.] SATURDAY, 29th MARCH, 1902. 65 day's at Sea [88-277

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N 3° 7' 21" / Appt. Noon 3 7 26 } Var. 1 Hour, 58·49" | Equation of Time, decreasing, Sub. from Mean Time, 5m 5·10s Add to Appt. Time, 5 5·03 } Var. 1 Hour, 0·767s. | Sun's Semi-Diam., 16' 2" | Sidereal Time 0h 23m 48·7

At noon the wind came out from N.E in a heavy squall which ended in a strong N.N.E sail breeze.

Toward the latter part of the day it moderated and the wind backed to E.N.E. We are on the wind making 2 knots to the way with 7 of 8 gallant sails. I fully expected westerly winds when I got up here but it seems that there is not any thing in it for us this time.

I have been trying to get some work done down in the hold. But we do not more than get started at it. when we have to come on deck to handle sail as usual

75. Log

Lat. by Obs., 30.5
Long. by Obs., 141.3
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

8.01 W - 36.8
10 55,55, 29.07
4 36 ☾
10,51,19 29 16
31,20
87,02
135 86 147 42
4 4 73,51
141.39 29,16
4 4 35

1 0 6 8 4 4
.0 0 0 5 4
4.4 4 4 2 6
4,8 4 6 3 0
9,3 5 9 6 0
20.11.20
3 14
20 14 34
10 51 15
9 25 15

10.56 22, 29.14
4 36 ☾
10-51-44 = 29.23
31,15
135 15 47,4
☾ 3 147.44
141 20 73 5-2
15 29,23
141.35 4 4 29

.0 6 8 0 8
.0 0 0 5 4
4.4 4 3 8 5
4.8 4 5 5 3
9,3 5 4 0 2
20.11.48
5 14
20,17 02
10 31 41
9 25 21

3.04.26
☾ 06
2 38 20
4 00
2 34.20
00 00 00
87.03.40

5.03.03
11 00
3-14+

8 8 40
4 1 48
2 4 07
2 3 8
30.59

14
15

7.40.W 66.Log

10.20.30.. 23.36 | 10.21.03. 23.42 | 30.38. 141.36 | 3.30.
4 36 8 | 4.36 8 | 32.43 143 44 | 9
10.15.54=23.44 | 10 16 27=23.50 | 1 04 2.68 | 3.21
31,53 | 31.53 | Lat Dep. | 4
135 15 86.42 | 135-15 66.42 | 44=109 128 | 3.17
8 2. 142-19 | 8 1.30 142 25 | | 90 00
143.17 71-09 | 143.14 30 71 12 | N 31°E. 126 | 86.42
28 23.44 | 28 23.50
143.45 4725 | 143,44-30 47.22
.07103 .07103
.00042 .00072
4.50933 4.50621
4.86705 4.86470
9,34813 9,44666
19.44.04 19.44.36
4 57 4 57
19 49 03 19 49 33
10 15.54 10.16.27
9-33-09 9,33 06

8950
5940
3010
345
3355

7.38.W. 41. Log
10.13.35. 25.02 | 10.14.03. 25.08 | 219 diff Lon
4.36 8 | 4.36 8 | Lat Dep
10-08-59=25-10 | 10-09-27=25-16 | 107-183
33,28 | 33 28
84.18 | 84.19 | N 61° 208
135-30 144=5-7 | 135 30 145 03
1 14 72-24 | 11 13 72,31
44 44 | 146,43 25,14
46 23 10 | 46
47.24 47 18 | 147 25 47 15
3 43
.07873 .07873
.00090 .00090
4.47884 4.47774
4.86624 4.86589
5.42471 5.42326
19-51-38 19.52.08
4 18 4.18
19 55-56 19 56 26
10 4 59 10 4 27
8.46.57 9.46 59

40

3, 5-4.
5
3.45-
4
3 41
90 00
86 18
4.28.
4
4.17.
89 41
59 32
29 5-
3 4-
33.4

Nautical Diary and Day's Work Book, "Dirigo" from Hong Kong to Hilo

[89-276.]

14th Week.] Sunday 30TH MARCH, 1902 (Easter Sunday). 66 day's at Sea.

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N 3° 30' 43" / Appt. Noon, 3 30 48 } Var. 1 Hour, 58·33" | Equation of Time, decreasing / Sub. from Mean Time, 4m 46·71s. / Add to Appt. Time, 4 46·65 } Var. 1 Hour, 0·764s. | Sun's Semi-Diam., 16' 2" | Sidereal Time, 0h 27m 45·29s.

This day begins with a fresh unsteady breeze from NE. to ENE.
At 4. Pm. Wore ship to North during the middle part the wind Backed to SE. Moderate breeze
Sea running from NE.
Latter part of this day Brisk breeze Hauling to SSE.
fine pleasant weather
Have had 16 miles ENE Current during the day

Lat. by Obs., 32°08
Long. by Obs., 143°44
Course by Obs.,
,, by D. R.,
Distance by Obs., 126
,, by D. R.,
,, by Log, 116
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

SS. Log

[90-275.]

14th Week.] MONDAY, 31st MARCH, 1902. 67 days at Sea

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, 3° 54' 1" / Appt. Noon, 3 54 6 } Var. 1 Hour, 58·16" | Equation of Time decreasing, / Sub. from Mean Time, 4m 28·40s. / Add to Appt. Time, 4 28·35 } Var. 1 Hour, 0·761s. | Sun's Semi-Diam., 16' 2" | Sidereal Time, 0h 31m 41·84s.

This day comes in with fresh SSE breeze Which backed to SW during the middle part of the day

Middle part strong breeze and the Ship could only steer 8 miles per hour with every thing in her favor.

Latter part strong breeze, overcast Wind S.S.W. About 20 miles ENE current in our favor

Lat. by Obs., 33°44
Long. by Obs., 147.25
Course by Obs.,
,, by D. R.,
Distance by Obs., 208
,, by D. R.,
,, by Log, 166
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

SS. Log

Nautical Diary and Day's Work Book, "Dirigo" from Hong Kong to Hilo

14th Week.] TUESDAY, 1st APRIL, 1902. 68 days at Sea [91-274.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, | Mean Noon, N 4° 17' 15" / Appt. Noon, 4 17 19 | Var. 1 Hour, 57·98″ | Equation of Time, decreasing, Sub. from Mean Time, 4m 10·18s. / Add to Appt. Time, 4 10·13 | Var. 1 Hour, 0·757s. | Sun's Semi-Diam., 16′ 2″ | Sidereal Time, 0h 35m 38·39s.

Throughout this day fresh breezes from SSW to South.

Weather overcast thick and rainy at times

The Ship moves along like a Sled being dragged over bare ground. 7. and 8. knots is the best I can get out of her

62 on Log

DR

Lat. by Obs., 35° 05

Long. by Obs., 157° 04

Course by Obs.,

,, by D. R.,

Distance by Obs., 200

,, by D. R.,

,, by Log, 183

Current.

Var. used, 17 2.

Dev. used, 9'

Wind, Direct, SSW

,, Force,

Sea,

Weather,

Barom.,

Thermom., Air,

,, Sea,

Hygrometer,

14th Week.] WEDNESDAY, 2nd APRIL, 1902. 69 days at Sea [92-273.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, | Mean Noon, N 4° 40' 25" / Appt. Noon, 4 40 28 | Var. 1 Hour, 57·78″ | Equation of Time, decreasing, Sub. from Mean Time 3m 52·08s. / Add to Appt. Time, 3 52·03 | Var. 1 Hour, 0·752s. | Sun's Semi-Diam., 16′ 1″ | Sidereal Time, 0h 39m 34·95s.

At one P.M. the ship was struck a-back with the wind from NE. and it blowed fresh with constant rain until midnight

during the middle and latter part of the day moderate breeze from NE

Now ship to NNW at 6 am.

We have Sailed 77 miles and have not made one mile Eastery

Lat. by Obs., 34°40

Long. by Obs., 151.08

Course by Obs.,

,, by D. R.,

Distance by Obs.,

,, by D. R.,

,, by Log, 77

Current.

Var. used,

Dev. used,

Wind, Direct,

,, Force,

Sea,

Weather,

Barom.,

Thermom., Air,

,, Sea,

Hygrometer,

34 on Log

33,44 147,25
1 16 3 43
33,00 151,08

4.17.19
900
4.08.19
4
4.04.19
90.00.00
63 5-5-41

4.10.15
17 cr
4.17.15
3
4.20.15

39
88
77

4.40.24
9
4.31

89 99
59 55
30 14
431
34.45

8.34.W 20. Lgs

10.45-.40 = 35.38

8.40W. 20. Lgs
10.48.5-8. 36.16
4.37 10
10.44.21 = 34.24
35.50
85.10
157 26
78.43
36 26
42.17

150
2 14
152.14

.05113
.00155
4.29150
4.82788
5.21204

20.49.82
3 45
20 33 17
10 44 21
10.08 56

34.45
1 20
34 05

10.50.25. 36.27

8.50 23. Lgs
10.52.16. 37.14
4 37 10
10.47.39 = 37.24
37.24
84 47
159 35
79.47
37 24
42 23

133.11
20
133.31

.09995
.00180
4.24466
4.82872
5.17935
20.52.58
3 26
21 40 24
10 47 34
10 12 45

10.52.48. 37.21

132.28. 36.00
133 31 37 29
1 02. 1.29
Lat @ 1/4
62 = 72

~ 49° E. 95. miles

5.03.39
8.04
4-34-2
4.02
4.50.29
80.00.0
85 09.3

3.34.0
10
3.45

89 50
57 36
32 20
5 17
37.37

5.26.3
8.04
5 17 2
4 0
5. 13 2
90.00.0
84.46 3

3.14.29
10
3.26

89 50
57 28
32 1 2
5 1 7
34.29

"Dirigo" from Hong Kong to Hilo

Nautical Diary and Day's Work Book, 70 day's at Sea [93-272.]

14th Week.] THURSDAY, 3RD APRIL, 1902.

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N 5° 3′ 29″ / Appt. Noon, 5 3 33 } Var. 1 Hour, 57·56″ | Equation of Time, decreasing, { Sub. from Mean Time, 3m 34·10s. / Add to Appt. Time, 3 34·06 } Var. 1 Hour, 0·746s. | Sun's Semi-Diam., 16′ 1″ | Sidereal Time, 0h 43m 31·50s.

This day begins with a strong breeze from N.E. with frequent squalls during the middle part the wind hauled East unsteady in force. Quite a heavy Easterly sea running.

Weather overcast and cold.

Latter part of the day Wind SE. blowing a gale and heavy

Lat. by Obs., DR 36.00
Long. by Obs., 132.25
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log, 99.
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

38 on Log

71 day's at Sea [94-271.]

14th Week.] FRIDAY, 4TH APRIL, 1902.

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N 5° 26′ 28″ / Appt. Noon, 5 26 32 } Var. 1 Hour, 57·34″ | Equation of Time decreasing, { Sub. from Mean Time, 3m 16·28s. / Add to Appt. Time, 3 16·24 } Var. 1 Hour, 0·739s. | Sun's Semi-Diam., 16′ 1″ | Sidereal Time, 0h 47m 28·05s.

This day comes in with a SE gale hard squalls of wind and rain and a high Sea running during the latter part of the middle watch the wind moderated and hauled to SSW

Latter part of the day Wind SSW Moderate Breeze thick at times Heavy SE. Sea.

Lat. by Obs., 37° 29
Long. by Obs., 153° 31
Course by Obs., N 49° E
,, by D. R.,
Distance by Obs., 95
,, by D. R.,
,, by Log, 100
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

38 on Log

Nautical Diary and Day's Work Book. "Dirigo" from Hong Kong to Hilo

14th Week.] SATURDAY, 5TH APRIL, 1902. 72nd day at Sea

NAUT. EPHEMERIS, { Sun's Declination, increasing, | Mean Noon, N 5° 49′ 22″ / Appt. Noon, 5 49 25 } Var. 1 Hour, 57·09″ | Equation of Time, decreasing, Sub. from Mean Time, 2m 58·62s. / Add to Appt. Time, 2 58·58 } Var. 1 Hour, 0·732s. | Sun's Semi-Diam., 16′ 0″ | Sidereal Time, 0h 55m 21·16s.

This day begins with a moderate breeze from SSW. and a heavy easterly swell. During the middle part the wind gradually backed round by west to North without increasing in force.

We have been sailing over the Easterly swell at the rate of four knots per hour with all drawing sails set. We are only getting the usual weathers pertaining to these latitudes at this season. We are seventy two day's from Hong Kong and have got about 3700 miles to go to end this profitable voyage.

Latter part of the day. Light airs which backed East. Wore ship to W.N.W. at 10 am.

2 P on Log

Lat. by Obs., 38°
Long. by Obs. 165°
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log, 90
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

15th Week.] Sunday, 6TH APRIL, 1902 (Low Sunday). 73 day's Sea [96-269.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, | Mean Noon, N 6° 12′ 9″ / Appt. Noon, 6 12 12 } Var. 1 Hour, 56·84″ | Equation of Time, decreasing, Sub. from Mean Time 2m 41·15s. / Add to Appt. Time, 2 41·11 } Var. 1 Hour, 0·724s. | Sun's Semi-Diam., 16′ 0″ | Sidereal Time, 0h 55m 21·16s.

The first and middle part of this day unsteady Easterly winds weather overcast, not too much Easterly sea.

At 4 am. Wind N.E. light with constant rain and very cold.

This is "Low Sunday". It is certainly blue enough with us. Things are at bed rocks on board of this Clipper although we cannot reasonably expect anything outside of the prevailing weather of the season. That is what we are getting, and what we have had every since we left Hong Kong.

Since we began this interesting and eventfull trip we have had about four day's put it all together with the Yards off. The Packet says "For most of the time it has been full and by making a two to four point lee way course"

6 Bells Log at noon

D.R
Lat. by Obs., 37. 56
Long. by Obs., 154. 19
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

191

3.40.28
5 4
3. 31 24

3.3,31
1 56
33 21

38.09
37 50
19

15'
153. 21
153 26
4 7
3 16
54

133.21
57
134.18

89 56
57 12
32 34
3 31
34.03

15th Week.] MONDAY, 7TH APRIL, 1902.

AUT. EPHEMERIS,	Sun's Declination, increasing,	Mean Noon, N 6° 34′ 51″ / Appt. Noon, 6 34 53	Var. 1 Hour, 56·56″	Equation of Time, decreasing, Sub. from Mean Time 2m 23·87s. / Add to Appt. Time, 2 23·84	Var. 1 Hour, 0·715s.	Sun's Semi-Diam., 16′ 0″	Sidereal Time, 0h 59m 17·71s.

This day begins with a light breeze from S.E. which gradually backed to North and then N.W.

during the middle part moderate breeze with frequent rain squalls increasing at times in force.

Latter part of the day strong N.W. wind's with hard squalls of wind rain and hail

The ship broached too. and for five hours was three points to windward of her course with the helm hard up. with only lower T'gs'l on the Trizzen and all the sail she would stand on the Fore and main. I have shifted some ballast and it has made things a little better

Lat. by Obs., 38°28
Long. by Obs., 159°24
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log, 157
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

37, in Lay

16th Week.] TUESDAY, 8TH APRIL, 1902. 75 days at Sea [98-267.]

AUT. EPHEMERIS,	Sun's Declination, increasing,	Mean Noon, N 6° 57′ 25″ / Appt. Noon, 6 57 27	Var. 1 Hour, 56·27″	Equation of Time, decreasing, Sub. from Mean Time, 2m 6·81s. / Add to Appt. Time, 2 6·78	Var. 1 Hour, 0·706s.	Sun's Semi-Diam., 16′ 0″	Sidereal Time, 1h 3m 14·26s.

This day comes in with a strong N.W. wind which increased to a gale with hard squalls and high sea. At 8 AM. the Ship broached to and layed wallowing in the trough of the sea for twelve hours. I tryed every way I could to get her before the wind again but could not. She would fall off two or three points then back again. and I am lucky to have any masts in the ship to day. The Ship is so foul that she will not carry Sheets or sail. At 10. am. it having moderated we managed to get her off before the wind. The day ends with a fresh steady breeze from W.N.W and sea more regular

Lat. by Obs., 38°52
Long. by Obs., 162, 50
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

5 on Leg

---

2. 25. 45. 25°36

7.44 W. 4. Leg
2. 26. 17. 26 3
4.37 9
2. 21. 40 = 24. 12
38. 20
150 45 83. 38
8 34 148 11
158. 48 74. 05
39 26. 12
159. 28 47 53

.105 45 18. 42. 45
.00267 2 34
4. 43813 18 45 19
4. 87026 9 21 40
5. 41156 10 23 39
18. 54. 24
2 34
18 51 38
9 21 40
10. 33 18

6. 34. 53
10. 00
6 24 52
3 48
6 21 04
90. 00. 00
83. 38. 56

2. 23. 84
7 10
2. 30. 94
3 16
2. 34. 04
88. 50
37 47
32. 03
6 25
38, 28

6. 57. 27
10. 00
5 47 27
3 48
89 50
67 47
32 03
4 47
5 8 50

Nautical Diary and Day's Work Book, "Dirigo" from Hong Kong to Hilo

15th Week.] WEDNESDAY, 9TH APRIL, 1902. 76 day at Sea [99-266

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N 7° 19′ 52″ / Appt. Noon, 7 19 54 } Var. 1 Hour, 55·97″ | Equation of Time, decreasing, Sub. from Mean Time, 1m 49·98s. / Add to Appt. Time, 1 49·95 } Var. 1 Hour, 0·696s. | Sun's Semi-Diam., 15′ 59″ | Sidereal Time, 1h 7m 10·8s.

The first part of this day strong breeze. from W N W. With a heavy N W sea running after getting the ship before the wind she seemed to go along fairly well. So I set the Main Top gallant & sail. At 8 PM she broached to in a squall. and just about shook the rivers out of every thing before we could get the sail off the ship and the yards braced up. In the lull after the squall she got the ship before the wind again. If the sea strikes us quartering it shoves the ship right up in to the wind. When she gets started the Rudder does not have any effect on her at all. Middle part of the day the wind fell light. the Ship will steer with a light breeze. but she is a long time answering the Helm

Latter part of the day. Wind South light breeze thick and raining. Barometer dropping fast heavy swell from N W

28 on Log

Lat. by Obs.,	38° 40
Long. by Obs.,	145° 5
Course by Obs.,	
,, by D. R.,	
Distance by Obs.,	
,, by D. R.,	
,, by Log,	
Current.	
Var. used,	
Dev. used,	
Wind, Direct,	
,, Force,	
Sea,	
Weather,	
Barom.,	29. 48
Thermom., Air,	
,, Sea,	
Hygrometer,	

8.30. W.= 17. Log

8. 58.45 = 37°.33
4.34 10
9. 54.07 = 37-43
38.50
82.33
145 30 159 08
9 79 44
22 37.43
146.01 42 01
.10448
.00331
4.25098
4.82565
9.18842
20.54.57
1 47
20 56 44
9 54 04
11.02.37

9. 58.22 = 37.41
4.34 10
9. 54.07 = 44 37 51
38.20
82.33
159 06
79 33
145.23 37 51
22
165.45 4142
.10545
.00331
4.25858
4.82297
9.19031
20.54.30
1 47
20 56 17
9 54 44
11.01.33

8 9 30
5 8 30
3 1 2 0
7 1 6
3 8.3 6

7.19.54
10.00
7.09.54
3.48
7.05.06
90.00.00
82.54.52

1.36.36
10.00
1.42.36

15th Week.] THURSDAY, 10TH APRIL, 1902. 77 day's at Sea [100-265.

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, 7° 42′ 12″ / Appt. Noon, 7 42 14 } Var. 1 Hour, 55·65″ | Equation of Time, decreasing, Sub. from Mean Time, 1m 33·38s. / Add to Appt. Time, 1 33·36 } Var. 1 Hour, 0·686s. | Sun's Semi-Diam., 15′ 59″ | Sidereal Time, 1h 11m 7·36s.

This day begins with a light breeze from South Stuck and raining. At 2. PM wind SE. 4. PM. Wind E. strong breeze continued rain. 8 PM Wind NE. hard squalls of wind and rain. Barometer at 29.32. 9. PM. wind W W. wore ship to East. and steered East of a course. During the middle Watch the ship came to the wind against the Helm twice. and there is not much sea running either The Barometer has risen three Tenths.

At daylight Wind West light. and remained so during the remainder of the day

All sail set on Fore & Mains. only lower T Sl Sail on the mizzen. ship Sailing five miles per hour. The Barometer has fluctuated 1/2 an inch. and the wind has been all around the compass during the past day

15 on log

Lat. by Obs.,	38° 2
Long. by Obs.,	167.
Course by Obs.,	
,, by D. R.,	
Distance by Obs.,	
,, by D. R.,	
,, by Log,	90
Current.	
Var. used,	
Dev. used,	
Wind, Direct,	
,, Force,	
Sea,	
Weather,	
Barom.,	
Thermom., Air,	
,, Sea,	
Hygrometer,	

7.24.W. 95. Log

8. 28.03. 21. 50
4 38 8
8. 23.25 = 21.58
38.25
82.32
145 30 142 55
1 14 71.27
166.44 21.58
22 dff 45.29
167.06

H 2h 5m 8. 28.43. 21° 59′

38.25. 167.06
2 30
169.36

.10595
.00370
4.50261
4.88094
9.49320
19.28.40
1 43
19 30 23
8 23 25
11.06 38

17

7.42.14
10.00
7.32.14
3 48
7.28 26
90.00.00
82.31.34

1.33.34
10
1.43.34

89.52
58 54
30 58
7 32
23 26

Nautical Diary and Day's Work Book, "Dirigo" from Hong Kong to Hilo

15th Week.] FRIDAY, 11TH APRIL, 1902. 78 days at Sea [101-264.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, } { Mean Noon, N 8° 4′ 24″ / Appt. Noon, S 8 4 25 } Var. 1 Hour, 55·32″ | Equation of Time, *decreasing*, Sub. from Mean Time 1m 17·03s. / Add to Appt. Time, 1 17·02 } Var. 1 Hour, 0·675s. | Sun's Semi-Diam., 15′ 59″ | Sidereal Time, 1h 15m 3·92s.

This day comes in with a light breeze from West which Backed to South and SSE towards night and freezed up. Barometer falling to 29,35". During the middle part of the day it blowed a strong gale with constant rains. At daylight it shifted to SW. in a squall and blowed fresh the remainder of the day. I have been trying to clean the Barnacles off the bilge. I run a Devis under the ship while it was moderate Yesterday. To day we Served some Seamlits with old rope and wedghted one end and hung them over the side and let the sea bang them back and forth. shifting them along every little while and they have done a lot of good.. One of my men fell down the hatch on to the Ballast and it has laid him up for the remainder of this passage. The mate has been in his bunk with a stye-sore for Several days. and the old man is going it alone - and is having a hell of a time. My Ship has been very little better than a derelict as far as working is concerned

Noon Obs
Lat. by Obs., 38.30
Long. by Obs., 169°36'
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log, 116
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

8, 24, 29
10.
8 14
16

172, 24
2 24
174.50

85.50
58 5
31, 4, 5.
8 14
40, 01

169, 36
2 50
172, 26

15th Week.] SATURDAY, 12TH APRIL, 1902. 79 days at Sea [102-263.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, } { Mean Noon, N 8° 26′ 28″ / Appt. Noon, S 8 26 29 } Var. 1 Hour, 54·97″ | Equation of Time, *decreasing*, Sub. from Mean Time, 1m 0·95s. / Add to Appt. Time, 1 0·94 } Var. 1 Hour, 0·664s. | Sun's Semi-Diam., 15′ 59″ | Sidereal Time, 1h 19m 0·47s.

The first and middle part of this day. The wind was South and SSW. fresh breeze constant rain and high sea. at day light the wind Shifted to West. in a Squall and moderated to a gentle breeze, with clear weather Old Sol. not only looked good but he felt good after our long Spell of Stinck dirty weather We have all drawing sail set. and the Steering has improved very much. I think the man I have at the wheel as 2nd Mate is a Hell-diver he has been in front of them big ships that have rolled their masts out when in Ballast the "Comet" was the last one. I have always obeyed orders and am going to Hilo if I do not get there until Christmas. I have done all I could to get there. & My Judgement tells me to go to Frisco as the Ship is certainly not in a condition to go around Cape Horn in the Winter time with sugar

No. Obs 116
Lat. by Obs., 40. 01
Long. by Obs., 172°26
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log, 132
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Hong Kong to Hilo

16th Week.] Sunday, 13TH APRIL, 1902 (2nd Sunday after Easter). 80 day's at Sea

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N 8° 48′ 23″ / Appt. Noon, 8 48 24 } Var. 1 Hour, 54·61″ | Equation of Time, decreasing, Sub. from Mean Time, 0m 45·14s / Add to Appt. Time, 0 45·13 } Var. 1 Hour, 0·652s. | Sun's Semi-Diam., 15′ 58″ | Sidereal Time

Throughout this day we have had a gentle breeze from West with passing clouds and a swell running from N.W. We are carrying along with all drawing sail set and it is only a question of time when we shall reach our destination. The ship is steering fairly well and I think she will act better if we get another spell of bad weather. I have taken the "Sterling" across here with a Cutty Sark and made the passage in 61 days from Hong Kong to Hilo. But I did not have such a gales as I have had this time.

We sailed in April and that is as soon as a ship should leave Hong Kong to make this passage. This fact has been illustrated often enough.

The Barometer has risen an inch and I am in hopes to have some settled weather. 81 on Log

Lat. by Obs., 40°
Long. by Obs., 178°
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

16th Week.] MONDAY, 14TH APRIL, 1902. 81 days and 82 day's at Sea

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, 9° 10′ 10″ / Appt. Noon, 9 10 10 } Var. 1 Hour, 54·23″ | Equation of Time, decreasing, Sub. from Mean Time, 0m 29·63s / Add to Appt. Time, 0 29·62 } Var. 1 Hour, 0·640s. | Sun's Semi-Diam., 15′ 58″ | Sidereal Time, 1h 26m 53·57s

During the first part of the day the wind backed to South and S.E. Light Breeze
Middle part fresh breeze thick and raining
At daylight the wind shifted to W.N.W. in a squall. which lasted two or three hours.
Then moderated and the wind backing to W.S.W

The Barometer has fluctuated ½ an inch during the day. It fell three tenths during the middle watch and jumped up again as soon as the first squall came from the N.
This has been a hard passage on running gear and sails as well as the mess. 20 on Log

Monday Apr. 14

To change the date having passed from East to West Long: this day will contain forty eight hours
Have had fine weather with light unsteady winds from W.N.W. to W.S.W. 48 on Log.

East Longitude
Lat. by Obs., 40° 37
Long. by Obs., 178° 35
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R., 131
,, by Log, 125
Current. West Longitude
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Dis

7, 11, W.

7. 47. 40 = 21, 16
4. 40 6
7. 43. 00 = 21, 24
40, 00
81, 27
142, 51
71, 26
21, 24
50 01

.11575
.00485
4.50336
4.88436
9.50832

20, 23, 15
57
20 24 12
7 43 00
11. 41. 12

145 15
10 4
175. 19

7, 20, W 7, 5, Lay
= 7, 54, 10 .. 22, 30
4. 40 6
7- 49-30 = 22-36
40, 21
81, 27
144 24
72, 13
22, 36
49. 35

165-15-
10 7
175. 22
21
175=43

.11788
.00485
4.48490
4.88158
9.48932

19. 30. 04
5-3
19. 30 59
7 48. 30
11. 41. 29

7, 42, 05-
7, 38, W. 12, Lay
7, 48, 20, 25, 1
7, 44, 12 „ 25, 25
12- 4, 40 8
7, 39, 32 = 25-33
7 43 37 40, 37
11. 35 55 60, 42
146 52
73, 26
25, 33
155 45 47-53
13 14
168 59
47
176. 12

.11871
.00575
4.45504
4.87024
9.45078

19. 43. 13
24
7. 43 37

8, 48, 24
11, 30
8, 36 54
3 42
8, 33 12
90 0 0. 00
81 26. 48

00, 45, 18
8, 50
00 53 03
3 30
+ 54-33

89 50
54 52
32 00
8 37
40, 37

89, 50
68 04
30 44
8 37
40 21

8-14- 11 28-29
8-15- 11 28-40
4, 46 9
8. 10, 31 = 28, 49
40, 37
81, 05
150 31
75. 15-
28, 49
46. 26

East
.11971
.00528
4.40564
4.86008
9.39093

20, 02, 12
46
20-02-52
8, 10, 31
11 52 21

49, 24, W 37 W

7. 35. 00 = 23-35-
178. 35
2 37
181. 12
174. 35
1 45
180. 20

178. 19
2 53
175. 26

West 9. 10. 10" Lon.
11 30
9. 21. 20.
8. 42
8. 17 38
90. 00. 00
80. 42. 22

m s m
00. 29. 62
8. 00
+ 00. 21. 62
2 42
+ 00 24. 04

89 50
58 52
31 18
8 21
40 39

East Lon
9. 10. 10
11. 30
8. 58. 40
8 42
8. 54. 38
90. 00. 00
81. 05. 02

0. 29. 62
11 80
40 32

89 50
58 12
31 38
8 58
40. 39

7-26. W. 7 8 on Log.

19. 22. 15 = 24. 25.
4 40 8
18-17-35 = 24-33
7.35.45 40,39
1 41 5-0 80. 07
145-15 145 13
10 12.30 72,34
175.27 30 24 33
30 36 48-03
174-54

.11993
.00443
4.47452
4.87141
9.47249

7. 35. 55
10
7 35 45

19. 23. 36. 24. 39
19. 24 36. 24. 51
4.40 8
19-19-56 = 24-59
7 34 38 40 43
11-42-17 80, 07
145-43
145-30 72,51
10 4 24.57
175-34 47-54
31

173.03 .12036
.00443
4.48544
4.87035
9.46702

7. 37. 46
7. 37-39

9. 31. 49
10 12
19.41.57
4 12
9-35-14
80.00-00
80.00.46

m ser 4
00. 00. 7 49
7.05
31 4
-00.10 = 11

89,50
39 10
30 40
9 41
40-24

7, 15. 30 = 25, 44

7. 30. W. 8. Log.
7. 16.02. 25.50
12 4 40 8
19-11-22 = 23-56
7-42-13 40,05
11-29-09 80,01
146 04
145-15 73,02
7 2 25,50
172,17 47,12

.11428
.00463
4.46511
4.87535
9.45356

7, 42, 18
5
7-42.13

9. 58. 14
10. 12
10,03.26
4 00
9. 58. 26
90 00 00
00 00 30

m s "
-00. 00. 47
7. 34
00 08 23
3 4
-00 3 17

89,50
58 57
29 53
10 3
39, 56

Nautical Diary and Days' Work Book, "Dirigo" from Hong Kong to Hilo
83 day's out [105-260.]

16th Week.] TUESDAY, 15TH APRIL, 1902.

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N 9° 31' 47" / Appt. Noon, 9 31 47 } Var. 1 Hour, 53·84" | Equation of Time, decreasing, Sub. from Mean Time, 0m 14·42s. / Add to Appt. Time, 0 14·42 } Var. 1 Hour, 0·627s. | Sun's Semi-Diam., 15' 58" | Sidereal Time, 1h 30m 50·13s.

This day begins with fresh breeze and squally Weather The wind shifted to W NW at 1.Pm in a Severe squall have had to take every thing off the mizzen except Lower T'gsail and she will round to with every extra puff of wind. The Ship is in the same trim that I have always had her when in Ballast and I have done all we can towards cleaning her Dirigo. But she will not steer going faster than seven knots

Latter part of this day Moderate breeze from W NW with frequent mist and sleet squalls All Sail set on Fore & Main Lower T'gsail on the mizzen part of the time Upper T'sail set reefed The Ship Kowtowed to once in a squall

5 on Log

Lat. by Obs., 40°43
Long. by Obs., 175. 3
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log, 154'
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

16th Week.] WEDNESDAY, 16TH APRIL, 1902. 84th day at Sea [106-259.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N 9° 53' 14" / Appt. Noon, 9 53 14 } Var. 1 Hour, 53·44" | Equation of Time, increasing, Add to Mean Time, 0m 0·47s. / Sub. from Appt. Time, 0 0·47 } Var. 1 Hour, 0·613s. | Sun's Semi-Diam., 15' 57" | Sidereal Time, 1h 34m 46·68s.

Throughout this day moderate to light breezes from NW to NNW at 2.Pm. We had a heavy Rain squall without any extra wind The wind being light during the latter part we have all sail set

Day End's with light airs, Almost Calm

We will take the "Sun" this Time

13 on Log

Lat. by Obs., 39.57
Long. by Obs., 172-05
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log, 108
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Hong Kong to Hilo

16th Week.] THURSDAY, 17TH APRIL, 1902. 85 Day's at Sea [107-258.

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N 10° 14' 32" / Appt. Noon, 10 14 32 } Var. 1 Hour, 53·02" | Equation of Time, increasing, Add to Mean Time, 0m 15·01s. Sub. from Appt. Time, 0 15·01 } Var. 1 Hour 0·599s. | Sun's Semi-Diam., 15' 57" | Sidereal Time, 1h 38m 43·29s.

This day begins with light airs and Calms's four hour's the ship did not have way enough to steer. She layed in the trough of the old N.W. Swell and slatted a months wear out of her best sails. Toward night a light air came from S.E. which increased to a breze during the middle part of the day.

day end's with fresh breeze from S.E. overcast at times

averaged 7. knots this morning the ship has with the yards checked in a little: and all the press she could stand with all Sail Set and Smooth water

4. on Log.

Lat. by Obs.,	40.
Long. by Obs.,	169.
Course by Obs.,	
,, by D. R.,	
Distance by Obs.,	97
,, by D. R.,	
,, by Log,	94
Current.	
Var. used,	
Dev. used,	
Wind, Direct,	
,, Force,	
Sea,	
Weather,	
Barom.,	
Thermom., Air,	
,, Sea,	
Hygrometer,	

16th Week.] FRIDAY, 18TH APRIL, 1902. 86 day's at Sea. [108-257.

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N 10° 35' 40" / Appt. Noon, 10 35 39 } Var. 1 Hour, 52 59" | Equation of Time, increasing, Add to Mean Time, 0m 29·20s. Sub. from Appt. Time, 0 29·20 } Var. 1 Hour, 0·583s. | Sun's Semi-Diam., 15' 57" | Sidereal Time, 1h 42m 39·79s.

This day comes in with a fresh breeze from S.E. fine weather and smooth Sea. all Sail Set and Ship going 7½ Knotts per. hour –

Middle part Wind SSE. increasing in force weather overcast and raining. Sea running from S.W. handed the light sails at 3. am.

at day light handed T'gallant sails Crossjack and reefed the main sail. – rain squalls with strong puffs of wind. Barometer dropping fast.

This day ends with a strong squally breeze from south with constant rain

by Obs. the log gives 181 miles dis. going two points free of the winds

Lat. by Obs.,	40°48
Long. by Obs.,	165°58
Course by Obs.,	
,, by D. R.,	
Distance by Obs.,	
,, by D. R.,	
,, by Log,	181
Current.	
Var. used,	
Dev. used,	
Wind, Direct,	
,, Force,	
Sea,	
Weather,	
Barom.,	
Thermom., Air,	
,, Sea,	
Hygrometer,	

7. 5. W = 69. 2 of

16. 37. 15. 19. 5-2
4.40 8
16-32.35 = 20.00
7 8 43 40.25
11 22 52 79 41
140.06
145 30 70.03
5 13 20.00
140.43 30.03
45
69.68 -.11842
72 05 .00708
2 07 4.53301
4.88457
9.44308
187 7. 10. 13
20
7. 9. 43

16. 37. 5-2 20. 01

10° 14' 32"
10 12
10.24.44
4.12
10 20 32
90.00.00
99.40.32"

00.15.01
7.42
00 22.43
3 6
00.19.37

88.50
5 9 44
3 0 04
1 0 23
4.0.31

40. 31. 165. 5-8
17 4 00
40.48 165.58
N 85° E. 181 miles

40. 48. 165. 5-8
35 4
4 23 161. 5-8

	S	N
E by N 15	15·7	14.8
N E. 30	21	21
182		35

56
56
112

8950
5900
3050
1128
4218

42.20 154.31
39 211
40.41 156.20

7.40.W
16. 21. 00. 26.07
4 40 6
16-16-20=26-09
7 39 9 42.00
10 37 11 78.36
150 13 146-45-
9 9 73.22
139.18 26.09
47.13
.12893
.00845-
7.40.10 4.45-674
1 1 4.86565-
7 39 9 9.45997

16. 2. 30. 26.07
4 40 6
16-16-50=26-15-
7 40.15- 42.35-
10 34 35 78.36
147 26
150 9,5 73.43
139.09 26.15
38 47-28
154.31
.13295-
.00865-
4.44776
4.84740
9.45676
7.41.16
38 1 1
7 40 15

11.17.32
10 12
11.27.44
4 12
11.23.32
90 00.00
78.36 29
00 56.44
7.42
1.04.26
3 4
-1-01 20
8950
5838
3052
1128
42.20

Nautical Diary and Days' Work Book, "Dirigo" from Hong Kong to Hilo [109-256.]

16th Week.] SATURDAY, 19TH APRIL, 1902. 87 Days

AUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N 10° 56′ 37″ / Appt. Noon, 10 56 36 } Var. 1 Hour, 52·14″ | Equation of Time, increasing, Add to Mean Time, 0m 43·02s. / Sub. from Appt. Time, 0 43·01 } Var. 1 Hour, 0·567s. | Sun's Semi-Diam., 15′ 57″ | Sidereal Time, 1h 46m 36·34s.

This day comes in with a strong squally breeze from South and constant rain.
Middle part fresh Gale
Latter part strong gale with high sea from South
At 8 am kept the ship N.E. by E to keep the sea on the quarter The Barometer has fallen 8/10 of an inch

no Obs.

Lat. by Obs., 41°23
Long. by Obs.,
Course by Obs., N.E. by E
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log, 182
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29-30
Thermom., Air,
,, Sea,
Hygrometer,

88 days at Sea

[110-255.]

17th Week.] Sunday, 20TH APRIL, 1902 (3rd Sunday after Easter).

AUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N11° 17′ 23″ / Appt. Noon, 11 17 22 } Var. 1 Hour, 51·69″ | Equation of Time, increasing, Add to Mean Time, 0m 56·45s. / Sub. from Appt. Time, 0 56·44 } Var. 1 Hour, 0·551s. | Sun's Semi-Diam., 15′ 56″ | Sidereal Time, 1h 50m 32·89s.

At 1. PM. the wind shifted to West with a squall There is a high sea running from South; and another coming in from W.N.W. which makes it very uneven on board the Dirigo. She is doing some tall rolling Middle part strong gale from West with heavy squalls of hail. and wind Toward the latter part of the day Squalls took off and the wind settled to a steady breeze. We have been steering anywhere from N.E. to E.S.E. and going 7. Knots

Lat. by Obs., 42·20
Long. by Obs., 154·31
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log, 160
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29,30 to 29,80
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book. "Dirigo" from Hong Kong to Hilo

17th Week.] MONDAY, 21st APRIL, 1902. 89 day's at Sea [111-254.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, | Mean Noon, N 11° 37' 58" / Appt. Noon, 11 37 57 } Var. 1 Hour, 51·22" | Equation of Time, increasing, Add to Mean Time, 1m 9·47s. / Sub. from Appt. Time, 1 9·46 } Var. 1 Hour 0·534s. | Sun's Semi-Diam., 15′ 56″ | Sidereal Time, 1h 54m 29·45s.

This day begins with a fresh gale from West. from 2. to 4 Pm the Barometer fell 2/10 of an Inch. At 4. Pm we had a very heavy squall of wind. Hail. and Thunder and lightning from NW which lasted two hours; it then moderated to a fresh breeze from NW with passing Clouds

During the Middle part fresh steady Breeze from NW. with passing clouds and a high cross Sea running which causes the ship to roll very heavy - It is a wonder how the gear stands it. She rolls easy. and she has not started any thing yet, but the wear and tare is excessive this passage. = We are now where we were when 44 day's out last passage from Hong Kong to Honolulu This passage has been "Hilo" from the Start. =

Latter part of the day wind fell light and was almost calm at the end of the day

Lat. by Obs., 41° 21
Long. by Obs., 155,58
Course by Obs.,
,, by D. R.,
Distance by Obs., 132
,, by D. R..
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30-20
Thermom., Air,
,, Sea,
Hygrometer,

17th Week.] TUESDAY, 22nd APRIL, 1902. 90 day's at Sea [112-253.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, | Mean Noon, N11° 58' 22" / Appt. Noon, 11 58 21 } Var. 1 Hour, 50·73" | Equation of Time, increasing, Add to Mean Time, 1m 22·07s / Sub. from Appt. Time, 1 22·06 } Var. 1 Hour, 0·516s. | Sun's Semi-Diam., 15′ 56″ | Sidereal Time, 1h 58m 26·00s.

The first and middle part of this day light unsteady wind backing to S S W. Barometer at 30-36 it has been pumping upand down an Inch for the last two weeks

Latter part light breeze from South weather hazy

Sea running from West

Lat. by Obs., 40°43
Long. by Obs., 153°37
Course by Obs., S71°E
,, by D. R.,
Distance by Obs.,
,, by D. R., 112
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct, South
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air, 30·37
,, Sea,
Hygrometer,

6.56.W
5.18.40 . 17.00
17.19.23. 17.09
4.40 7
17.14.43. 17.16
6 49 24 40.45
10.25.08 78.08
136.09
6804
17.16
30.48

.12058
.00948
4.57232
4.88927
P.59166

6.50.45
1 10
6 49 33

17. 14. 43 17.16
6 49.24 41 33
10 25 19 78.08
136 59
68.28
17.14
31.12

15.15
5
134.20
22
133.54

.12586
.00938
4.56472
4.89173
P.59171

6.50.34
1 10
6.49.24

15-8.31 42.20
13538
2.33 117.40

11°.37.57"
9.40
11-47-37
4 12
11-51-49
90 00 00
78.08.11

M. Sun 1.09.46
5-00
1.14.52
4 30
-1-10 12

89 50
60 17
29 33
11 44
P1.21
12
33

7.42.W.
18.06.11. 27.48
4.40 9
18-01-31 = 27.58
7 45.58 40.49
10 15 33 77.56
146 83
73 24
27.58
45.23

15-0 45
8 8
133-33
14
133.37

.12102
.00870
4.45504
4.85237
P.43813

7.47.22
24
7-45-38

2 21
100
141

Dd.
104-84

11.58.21
9 46
12.08 01
4 12
12 03 49
90.00.00
77.54.11

1.23.06
5.00
1-28-12
4 30
-1-23-42

89 49
6-1 14
28 35
12 5
P40 43

17. 26. 40 – 22. 43

8946
6330
2616
1246
38.64

7-07 W

19. 28. 23, – 22. 43
4.40 8
18-23-43 = 22 51
7.16.46 40.42
1 0 04 5-7 77.36

15030 141 09
1 14 7034
131.44 2251
24 47.43
151.18 .12025-
.01025-
4.32207
4.86813
8.32170
133.37 7.18.20
1 14 1 34
2 18
139 7 16 46

12.16.32
5.40
12. 28.12
4.12
12 24 00
90.00.00
77.36.00

1, 34. 31
5.00
1 - 39-31
4.30
- 1-34

89.49
61 35
28 14
12 28
40 42

7. 37. W.

6, 07, 52. 81.50

40.42. 157.14
39 E 150 3
1.36 1 13
Dist Dep 75 Lon
94-3-4

S 31° E 112

16.08.25, 31.56
4 41 10
16-03-44-82 06
8 3.15 39.24
10.00 29 77.12
150.7 148 44
74 22
32.06
42.16
.11218
.01093
4.43053
4.82775
9.38139
8.03.00
1 45
8 03 15

12. 38. 32
9.40
12 48 12
4 12
12.44 00
90.00.00
77-16-00

1,45-

89.48
6330
2618
1248
39.04

Nautical Diary and Day's Work Book, "Diriyo" from Hong Kong to Hilo

WEDNESDAY, 23RD APRIL, 1902 (St. George). 91 Day's at Sea [113-252.]

7th Week.]

MOON PHENOMENA.	Sun's Declination, increasing	Mean Noon, N12° 18′ 34″ / Appt. Noon, 12 18 32	Var. 1 Hour, 50·24″	Equation of Time, increasing, Add to Mean Time, 1m34·23s. / Sub. from Appt. Time, 1 34·21	Var. 1 Hour, 0·497s.	Sun's Semi-Diam., 15′ 56″	Sidereal Time, 2h 2m 22·55s.

First and middle part of this day light
& moderate breeze from South; weather overcast.
Were as far East as it is necessary to go, but
with a South wind I shall keep on the starboard tack

This day ends with a moderate breeze from
South to SSW. hazy weather; smooth sea.
By the way the ship moves through the water
I shall want about ten degrees leeway to
Fit Hawaii. This is a nice fair wind for
the other fellow.

We have made one mile Southing steering
a two point course with the wind South
and all sail set.

Lat. by Obs., 40° 42
Long. by Obs., 157. 18
Course by Obs.,
,, by D. R.,
Distance by Obs., 104
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30-27.
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Diriyo" from Hong Kong to Hilo

THURSDAY, 24TH APRIL, 1902 92 Day's at Sea. [114-251.]

7th Week.]

MOON PHENOMENA.	Sun's Declination, increasing.	Mean Noon, N12° 38′ 33″ / Appt. Noon 12 38 32	Var. 1 Hour, 49·73″	Equation of Time, increasing Add to Mean Time, 1 m45·938s. / Sub. from Appt. Time, 1 45·91	Var. 1 Hour, 0·478s.	Sun's Semi-Diam., 15′ 55″	Sidereal Time, 2h 6m 19·11s.

The first part of this day wind South
to SSW. light breeze. thick mist and rain

At Midnight the wind hauled to NW
then North cleared off and gave us
a gentle breeze during the remainder
of the day. We have had an excessive
quantity of rain this passage, and since
passing Japan the weather has been exceedingly
cold for the Latitude and season.

The barometer
is high and the wind North and it looks as
if it might run us into the trades.

Lat. by Obs., 39° 06
Long. by Obs., 150 04
Course by Obs., S 31° E
,, by D. R.,
Distance by Obs., 112'
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30-30
Thermom., Air,
,, Sea,
Hygrometer,

F

Nautical Diary and Day's Work Book, "Dirigo" from Hong Kong to Hilo

17th Week.] FRIDAY, 25TH APRIL, 1902. 93 day, at sea [115-250]

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N12° 58′ 21″ / Appt. Noon, 12 58 19 } Var. 1 Hour, 49·20″ | Equation of Time, increasing, Add to Mean Time, 1m 57·16s. Sub. from Appt. Time, 1 57·15 } Var. 1 Hour, 0·458s. | Sun's Semi-Diam., 15′ 55″ | Sidereal Time, 2h 10m 15·90s.

This day comes in with a moderate breeze from North which gradually increased to a strong breeze. During the middle watch had to take the sail off the mizzen so to clear the ship.

Strong breeze from N.E. and a heavy swell from W.S.W. Current the ship to come to against the Helm.

Latter part of the day fresh breeze from E.N.E. passing clouds. The Sea is running around and running more with the wind and the ship is steering better.

We have made a good day's work for us.

Lat. by Obs., 36°18
Long. by Obs., 148.41
Course by Obs., S4.E
,, by D. R.,
Distance by Obs., 170
,, by D. R.,
,, by Log, 11
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air, 30-29
,, Sea,
Hygrometer,

17th Week.] SATURDAY, 26TH APRIL, 1902. 94 day's at Sea [116-249.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N13° 17′ 55″ / Appt. Noon 13 17 54 } Var. 1 Hour, 48·66″ | Equation of Time, increasing, Add to Mean Time, 2m 7·91s. Sub. from Appt. Time, 2 7·90 } Var. 1 Hour, 0·437s. | Sun's Semi-Diam., 15′ 55″ | Sidereal Time, 2h 14m 12·21s.

This day begins with a fresh breeze from E.b.N.E with passing clouds

Middle part Wind backed to N.N.E. and had frequent squalls & thunder & lightning at the night.

At daylight wind hauled East & N. Cleared off and the day ended with a fresh breeze with passing clouds and fine weather.

Lat. by Obs., 33°14
Long. by Obs., 150.04
Course by Obs., S4°W
,, by D. R.,
Distance by Obs., 184
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

33. on, 8kz

5.19.05 23.06
4 41 4
17.14.24 23 14
4 15 32 37 00
9.58 32 76.54
137 11
66.03
23.14
45 19

135 30
1 41 3
149.43

.09765
.01134
4.5-6311
4.85-187
9.523996

7.17.32
2 00
7.15.32

True Course
N 79°33' E
Var N 67 00 E
12.33' E
1.45 am
N 84.30 E
N 85.12
1°12' E.

Am. Sun Bur. N. 67. E

7.24 W 2. Log
17.29.47. 25 12
4 41
17.25.06. 25 21

True, N 80.55 E
Comp. 80.00 E
Error 0.55 E

N 80° E @ 7-20 am

7.13.W.

17.18.45 23.14
4.41 4
17-15-04 = 23.22
7 16 19 34 5-3
9 38 45 74.57
134 12
48 36
23.22
45.14

135-30
1 41 1
148.41

.09965
.01134
4.5-6215-
4.85-125
9.5-2175

7.18.19
2 00
7 16 19

38.06
34 14
2.44
60
144.

12.58.19
8.12
13.06.31
4.00
13.02 31
50 00 00
76.57 29
1.5-7.15-
4.12
2.01.27
1 27
2.00 00

8948
6637
23.11
13 7
36.18
40
34

17.30.13. 25.17
4 41 9
17.25.32 = 23.26
7 25 10 33.47
100.22 74.38
135-51
67.55-
25.24
4229

.08032
.01193
4.5-7514
4.82 95-5-
4.49694

7.27.20
2.10
7.25.10

N 80.E. 7.30.

19.17.54
4 12
13.26.04
4 00
13.22.04
50.00.00
76.37.58

2.07.90
4 12
2.12.02
1 27
2.10

8948
7000
1948
1326
33.14
31
47

7. 36. W 1 5-2. Lay

17. 40. 17. 27. 47
4.41 9
17-35-36 = 27. 56
7 36 04 31. 55
9. 59 32 44. 19
136 = 10
68 05
27. 56
40. 09

135 45
14 8
148. 33

89 48 .07119
72. 30 .01250
7 14 4.57201
13 45 4.80942
31. 03 9.46512

7. 38. 25
2 21
7 36 04

N 64. E, 31 m e 146

6. 45 W = 38. Lay
16. 43. 45 = 15. 25
4 41 7
16 39 04 15. 32
6 39. 07 28. 00
9. 59 57 43. 32
119 = 31
59. 45
15. 35
44. 10

27. 19. 150. 00 .05407
1 41 44 .01313
25. 38 45048 4.70224
4.44304
9.21252
6. 41. 36
2 29
6-39-07

17. 40. 55. 27. 54
4.41 9
17-36-14 = 28-03
7 36 32 30. 57
9. 39 42 76. 19
136-43 136-19
14 11 67. 39
149. 54 28. 03
35. 36

.04671
.01250
4.58008
4.80443
9.46372

33 14
30 36
2 44
2 20
164

7. 38. 63
- 2 21
7 36 32

7-42-W-26. Lay
5. 37. 30
5 38 14-27. 28
5. 40. 33 - 27-38
4 41 9
17. 35 52 28.07
7. 36 06 24. 03
9. 59. 46 75-59
135-45 132.09
14 12 66.04
149. 57 28 07
37. 57

.05427
.01313
4.60818
4.74885
9.46444
7 38. 33
2 29
7. 34. 04

13. 37. 15
4 12
13. 45. 27
4 40
13. 41. 27
80 00. 00
76. 18. 33

2. 18. 15
4 12
2. 22. 27
1. 27
2: 21. 00

89 49
72 03
16 45
13 45
30. 30
27
37

13° 6' 23"
8. 00
14. 04 23
9 12
14 01 11
90. 00. 00
75. 38 49

2° 27' 37"
3 12
2 3 64
2. 29 —

89 49
76 34
13 15
14 04
27. 19

Nautical Diary and Day's Work Book, "Dirigo" from Hong Kong to Hilo

Sunday, 27TH APRIL, 1902 (4th Sunday after Easter). 25 day

[Week.] | EPHEMERIS, Sun's Declination, increasing | Mean Noon, N13° 37' 17" / Appt. Noon, 13 37 15 | Var. 1 Hour, 48·11" | Equation of Time, increasing, Add to Mean Time, 2m 18·16s. / Sub. from Appt. Time, 2 18·15 | Var. 1 Hour, 0·410s. | Sun's Semi-Diam., 15′ 55″ | Sidereal Time, 2h 18m 8·77s.

Throughout this day we have had a fine Trade wind about 5 points free. every thing set except the Sails on the Jigger Mast which does not steer with the rest.

We have Sailed 164. by Obs.

Lat. by Obs., 30°30
Long. by Obs., 148.54
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R., 164
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.13
Thermom., Air,
,, Sea,
Hygrometer,

79. on Log

MONDAY, 28TH APRIL, 1902 26 day's at Sea

[8th Week.] | NAUT. EPHEMERIS, Sun's Declination, increasing, | Mean Noon, N13° 56' 25" / Appt. Noon 13 56 23 | Var. 1 Hour, 47·55" | Equation of Time, increasing Add to Mean Time, 2 m27·90s. / Sub. from Appt. Time, 2 27·88 | Var. 1 Hour, 0·395s. | Sun's Semi-Diam., 15′ 54″ | Sidereal Time, 2h 22m 5·32s.

All this day strong Trade's from N.E.

Mist and rain showers during the night

Latter part strong Trade with Mist squalls. At 3 P.M. Made Cape for a clean Ship. in Ballast With the ground 2 points a-starft the beam.

Lat. by Obs., 27°19
Long. by Obs., 150.00 East
Course by Obs.,
,, by D. R.,
Distance by Obs., 192
,, by D. R.,
,, by Log, 179
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29.98
Thermom., Air,
,, Sea,
Hygrometer,

56 Lay

Nautical Diary and Day's Work Book, "Dirigo" from Hong. Kong to Hilo

18th Week.] TUESDAY, 29TH APRIL, 1902. 9 7 day's at sea

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N14° 15′ 20″ / Appt. Noon, 14 15 18 } Var. 1 Hour, 46·97″ | Equation of Time, increasing, Add to Mean Time, 2m 37·12s. Sub. from Appt. Time, 2 37·10 } Var. 1 Hour, 0·373s. | Sun's Semi-Diam., 15′ 54″ | Sidereal Time 2h 29m 58·45s

Throughout this day Moderate Trade's with frequent mist squalls during the first part.

Middle and Latter part gentle breeze with passing Cloud's and fine weather

Lat. by Obs., 25°
Long. by Obs., 154°
Course by Obs., S24°
,, by D. R.,
Distance by Obs., 159
,, by D. R.,
,, by Log, 12
Current. Aft 24
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29.98
Thermom., Air,
,, Sea,
Hygrometer,

87 Noon 125 24

18th Week.] WEDNESDAY, 30TH APRIL, 1902. 98 day's [120-245.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N14° 34′ 0″ / Appt. Noon 14 33 58 } Var. 1 Hour, 46·38″ | Equation of Time, increasing, Add to Mean Time, 2m 45·80s. Sub. from Appt. Time, 2 45·79 } Var. 1 Hour, 0·351s. | Sun's Semi-Diam., 15′ 54″ | Sidereal Time 2h 29m 58·45s

The first and middle part of this day gentle breeze and fine pleasant weather with passing clouds

This day ends with light Trades fine weather

80 Log

Lat. by Obs., 28°2
Long. by Obs., 152.10
Course by Obs., S 31°W
,, by D. R.,
Distance by Obs., 10
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

7.31, W. 63. Log

28, 25 = 24. 20
29, 07 = 24 26
4.41 9
24.20 24.35
20 4 25.38
04.12 75.40
125 53
62.56
24.35
38.21

.045-00
.013 43
4.658 04
4.792 72
9.50949

7, 22, 50
2 42
7-20-08

Var - 27.19
9 25 00
9 2.19
66
139

Var Dev
138 = 42

8 24° W = 153.

Head SSW
6-18, am Sun's Bng bearing N 78°15′E
" " Compass " N 48 or 9
Error on SSW 11, 15-E

6-30, abt Suns true bearing N 80.#14E
" Compass " N 46-00
" Error SW by W 14, 14E

14, 24, 20 = 24.35
7 20, 23 25-25
75.40
$0.03.55 125-40
42-50
130 43 24-35
14 38.15
130.57
16
131.09

.044 21
.013 73
4.695 52
4.791 76
9.30922

7, 23, 07
2.42
7.20.25

14° 15′ 18″
8 00
14 23 18
9 12
14 20 06
90. 00 00
75; 39. 54

2″ 37. 40
3 12
2-40 52
1.18
-2 42 10

8949
7912
1037
1423
25,00

7-18 W
65. Log

17-18-30 21-03
17-19-07 21-11
4 41 8
17, 14 24 21. 19
7 5 01 23, 37
0.09.15 75.21
120 17
60,08
21, 18
38 49

.037 88
.014 35-
4.697 21
4.791 15-
9.54670

7.07.49
2 48
7.05.01

Sat D.R.
98 - 55.7
S 31° W 108

25.00
1 23
1.37 152,09

6.50 am Sun's True Bearing N 75°13
Compass " N 65°00
Comp Error " 10°13 E
on SS W Course

7, 32, W. 67. Log

57.40.11. 26°00
17.40.40. 26.00
4.41 9
17.35.59 - 26-15-
7 27.40 23,37
10.08 19 75.21
125 83
62.95
24
38 21

152 03
5
152 10

.037 88
.014 35-
23.27. 152,10 4.662 95-
51 22 4.792 85-
22.36 152,32 9.48814
7,30.26
2 48
7 27 40

25 00
23 27
1 33

14°33. 58″
8 00
14.41.58
3 12
14 38 46
90 00 00
75 21-14

2‴ sec 45″ 79‴
3.12
2.49.31
1 18
2 48 13

69.48
81.03
8 45-
14 42
23.27
5
2334

7.58.W = 35: Log

6.04.09. 30.54
4 41 10
17.58.28. 31 04
7 47 14 22.30
10, 1212 74.03
127 37
43.48
31.04
3244

15-3.04

.0 3 4 3 6
.0 1 7 0 5
4. 6 4 4 5 4
4. 7 3 2 9 8
9. 4 2 9 3 5

23.27. 152.10
22.08 153.14
1.19 1 6
Sat — Dist
79 = 41

7. 5-0. 12
2 56
7. 47. 16

23. 27. 152,10
1 4 37
22. 23 = 152 47

7.57

4.04.40 - 31° 02

6.08.25 31. 52
4 41 10
14.03.44 32 02
7 51 09 22.30
10 12 35 74.03
128 33
44 17
32 02
32.15

153.9
7

153°16

.0 3 4 3 8
.0 1 7 0 5-
4.6 4 1 4 1
4.7 3 2 9 3
9.4 2 9 3 5-

22.08 153.14
1848 153.5
8.22 1.49
60
142 sat
142 - 101.8
S. 35° 30W
dis 174.5 miles

7. 5-4.05-
2 52
7. 3 1 08

S 38W 100 58.19
22.2 23
1.38 44.1 44
23

G91.111

14.52.24
4 00
15.00 24
3.12
14 37 12
90.00.00
75.02 48

2.53.93
3 12
2 57 03
1 12
2.56

8948
8240
708
15
22,07
17
23

7.34.W
17.44.30 26.56

14.37.25. 27.54
4 41 5
14 32 44 28.03
4 18 24 20.46
10.14.20 74.38
123 27
61.43
28.03
33.40

.0 2 9 17
.0 1 5 81
4.6 7 5 62
4.7 4 3 7 5
9.4 6 4 3 9

4.21.20
3 6
4.18.14

4 Nm
27. Log

7.33 W. 1.8 Log
17.53.07 = 27.54
17.54.50 - 28-18
4.41 9
17.50.09 = 28.27
7 37.24 20.54
10.12 45 74.45
12 4 06
6 2 03
2 4.12 4
38.34

.0 2 9 5 6
.0 1 5 5 7
4.6 7 0 9 0
4.7 4 3 0 3
9.4 5 9 0 6

7 40 28
3 4
7. 37 24
Diff

15.10.35
8 00
15.18 35
3 12
15 15 23
80 00 00
74.44 37

3.07.53
3 13
3. 4 4
3-4

8941
8424
5-25
15 14
2043
11
20.54

12 on Log

Nautical Diary and Day's Work Book, "Dirigo" from Hong Kong to Hilo

18th Week.] THURSDAY, 1st MAY, 1902. 99 days at sea. [121-244.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N14° 52' 26" / Appt. Noon, 14 52 24 } Var. 1 Hour, 45·78" | Equation of Time, increasing, Add to Mean Time, 2m 53·94s. / Sub. from Appt. Time, 2 53·93 } Var. 1 Hour, 0·328s. | Sun's Semi-Diam., 15' 54" | Sidereal Time, 2h 33m 54·43s.

Throughout this day the Trades have been very light and we are just moving along at the rate of three miles per. hour. We are only a short distance from Hilo. It seems as if everything was combined to make this a record passage. It certainly has been enough to take the life out of any body. We had Friday's from the South Cape of Formosa and it has been up hill work all the way. I never went into port feeling as I do now although I did not expect any better or much better when I left Hong Kong

Lat. by Obs., 19°08
Long. by Obs., 155°14
Course by Obs., S 38 W
,, by D. R.,
Distance by Obs., 100
,, by D. R.,
,, by Log, 68
Current.
Var. used, 22°08
Dev. used, 15 2 52
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

44 on Log

18th Week.] FRIDAY, 2nd MAY, 1902. 100 days at Sea [122-243.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N 15° 10' 38" / Appt. Noon, 15 10 35 } Var. 1 Hour, 45·17" | Equation of Time increasing, Add to Mean Time, 3m 1·53s. / Sub. from Appt. Time, 3 1·52 } Var. 1 Hour, 0·305s. | Sun's Semi-Diam., 15' 53" | Sidereal Time, 2h 37m 51·54s.

Throughout this day light breeze fine weather with passing clouds

Hilo S. 54° W dis. 116. miles

Lat. by Obs., 20°54
Long. by Obs., 155°24
Course by Obs., S 22° W
,, by D. R.,
Distance by Obs., 79
,, by D. R.,
,, by Log, 68
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

12 on Log

7, 5-8.

G91.111

...ary and Day's Work Book, "Dirigo" from Hong Kong to Hilo

[18th Week.] SATURDAY, 3RD MAY, 1902. [123-242.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N15° 28' 34" / Appt. Noon, 15 28 32 } Var. 1 Hour, 44·54" | Equation of Time, increasing, Add to Mean Time, 3m 8·56s. / Sub. from Appt. Time, 3 8·55 } Var. 1 Hour, 0·281s. | Sun's Semi-Diam., 15' 53" | Sidereal Time, 2h 41m 48·09s.

Throughout this first part of this day Light breze Weather overcast. At 6 am made the SE point of Hawaii bearing S 5 W dis. 30 miles. At 8 am could see the town of Hilo bearing SW ½ W. 10 am Pilot came on board. At 11 we left the land and when within a mile of the harbor the Ship was taken a-back with a rain squall off the land and we had to stand off shore again. It rained hard all to 4 pm. At 5 pm. one of the pilot boats came out and took us in tow and we anchored in the harbor of Hilo at 8 pm. We were boarded by the Custom officials and Dr. of the port and Messrs Baker & Co Man. who informed me that he had just received a telephone message from the other side of the island saying that our Charter

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

19th Week.] Sunday, 4TH MAY, 1902 (Rogation Sunday). [124-24

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N15° 46' 16" / Appt. Noon, 15 46 13 } Var. 1 Hour, 43·29" | Equation of Time, increasing, Add to Mean Time 3m 15·02s. / Sub. from Appt. Time, 3 15·01 } Var. 1 Hour, 0·257s. | Sun's Semi-Diam., 15' 53" | Sidereal Time 2h 45m 44·65s.

war cancelled and that a letter would be here on monday giving me the particulars.

All I can say is this. I have done my level best to get this ship here.

It was up hill work from start to finish. A few more such trips and I will not want a ship of my thing else.

I am sending you this by the with the Chart of the China Sea

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom. Air,
,, Sea,
Hygrometer,

20.54

6.39. W 73. Log

17, 14, 30. 17, 44
4 41 4
17-19-49-17-32
6 51 42 20.04
10 7 8 07 74.27
11 2 27
5 6 13
134.32 17.52
4 38.21
4.44

.02738
.01619
4.74512
4.79272
8.58141

6.54.53
3 11
6.31.42

17 33,28, 22 04
4 41 4
17.28.47 = 22 12
7 10 10 20.08
10 18 37 74.27
11 4 47
15.0 30 5 6 23
4 9 22,08
134.38 34.15

.02738
.01619
4.71952
4.77181
5.53490

7.13.21
3 11
7 10 10

15.28.32
4 18
15.36.50
4 00
15.32.50
80 00.00
74.27.10

3.08.35
8 24
3.12.19
1 00
3.11

88 49
83 33
5 56
15 34
18.33

Nautical Diary and Day's Work Book, from to

19th Week.] MONDAY, 5TH MAY, 1902. [125-240.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, { Mean Noon, N16° 3′ 41″ / Appt. Noon, 16 3 39 } Var. 1 Hour, 43·24″ | Equation of Time, *increasing*, Add to Mean Time, 3m 20·92s. / Sub. from Appt. Time, 3 20·91 } Var. 1 Hour, 0·234s. | Sun's Semi-Diam., 15′ 53″ | Sidereal Time, 2h 49m 41·20s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

19th Week.] TUESDAY, 6TH MAY, 1902. [126-239.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, { Mean Noon, N16° 20′ 51″ / Appt. Noon, 16 20 49 } Var. 1 Hour, 42·57″ | Equation of Time *increasing*, Add to Mean Time, 3m 26·258. / Sub. from Appt. Time, 3 26·24 } Var. 1 Hour, 0·210s. | Sun's Semi-Diam., 15′ 52″ | Sidereal Time, 2h 53m 37·75s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, Hilo from Hilo to Honolulu

19th Week.] WEDNESDAY, 7TH MAY, 1902. [127-238.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N 16° 37′ 44″ / Appt. Noon, 16 37 42 } Var. 1 Hour, 41·88″ | Equation of Time, increasing, Add to Mean Time 3m 31·00s. / Sub. from Appt. Time, 3 30·99 } Var. 1 Hour, 0·186s. | Sun's Semi-Diam., 15′ 52″ | Sidereal Time, 2h 57m 34·31s.

As per instructions from Charleston We got under weigh a daylight and proceeded to Sea ops due at 9-30 Let Whaleboat go. When the NE point of Hawaii bore WSW and proceeded under all Sail.

at noon the point bore SW. 12 miles from which I take my departure

Wind very light from East

This day contains Lately known as to begin Sea log

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

18, 19, 18, 32,31
4 42 10
14 14 36 32,41
7 32 48 20,58
21 47 73,02
150 15 126 41
5 12 63,20
155·27 32 41
30.39
.0 2 9 7 5-
.0 1 9 3 3
4.6 5 2 0 5-
4.7 0 7 3 9
9.4 0 8 5-2
7.54.45-
3 5-4
7 5 2 4 9

7;49 W 61 Sog
18.18.45, 32,37
4,42 10
18 15 03 32 47
7 30,04 20,58
10,24 55 73,02
150 126,47
6 14 63,23
154.14 32 47
30 94

.0 2 9 7 5-
.0 1 9 3 3
4.7 5 2 0 5-
4.7 0 7 3 9
9.4 0 8 5 3
7.54 07
3 5 4
7.50.08

19th Week.] THURSDAY, 8TH MAY, 1902 (Ascension Day—Holy Thursday). [128-237]

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N 16° 54′ 21″ / Appt. Noon, 16 54 19 } Var. 1 Hour, 41·19″ | Equation of Time, increasing, Add to Mean Time 3m 35·19s. / Sub. from Appt. Time, 3 35·18 } Var. 1 Hour, 0·163s. | Sun's Semi-Diam., 15′ 52″ | Sidereal Time, 3h 1m 30·86s.

The first part of this day light airs from East S.S.W. beginning about North 15 during the middle part the wind backed to N.W. & in a rain squall

At day light the ISE & NE points of Maui bore S.W.½W. and W.S.W.½S giving an offing of twelve miles

We have had a strong westerly current during the night

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

5. 37.06. 27,25.
4.42 9
18,18,23, 32,15
4 42 10
18,13,43 = 32,25-
7 31 40 20,58
10,22 03 73,02
126 25-
153,31 63 12
32,25
30 47
.0 2 9 7 5-
.0 1 9 3 3
4.6 5 4 0 6
4.70 9 0 6
8.4 1 2 2 0
7. 5-5. 3 4
3 5 2
7 5 1 4 0

7,27,W. 60 Sog
17 37 - 30. 27. 30
4 42 09
17 32-48-27 39
7 31 09 20.58
10 21 48 73,02
121 39
155 13 60 48
27,39
155,27 33 10
.0 2 8 7 5-
.0 1 9 3 3
4,6 8 8 0 7
4,73 8 0 5-
8,47 5 2 0
7, 35.09
3 5 2
7,31.05

16.54.16
4.42
17.01.28
3 24
16 58 04
60 00 00
73.01 56
3.35.18
1 42
3.37,00
1
3.56
89.49
85 33
3 56
17 1
2 0 5 7

Nautical Diary and Day's Work Book, Ship "Dirigo" from Honolulu to Philadelphia

24th Week.] THURSDAY, 12TH JUNE, 1902. [163-202.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N23° 6′ 50″ / Appt. Noon, 23 6 50 } Var. 1 Hour, 10·17″ | Equation of Time, decreasing, Add to Mean Time, 0m 34·30s. / Sub. from Appt. Time, 0 34·31 } Var. 1 Hour, 0·506s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 5h 19m 30·32s.

5 days at Sea at 12-43. Kohu Head E by N

At 10 am got under weigh and proceeded to sea in view of the Coast

The boat left the ship at 12. m. we then made all sail. at day light wind was South with a heavy swell setting in on the reef. 10 am Wind S.E. fine breeze at noon. Wind hauled E.N.E. moderate breeze The wind has been to the southward for the past two weeks causing a heavy swell on the reef - The "Hero" was in sight of Honolulu the third day after she sailed

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom , Air,
,, Sea,
Hygrometer,

24th Week.] FRIDAY, 13TH JUNE, 1902. 1st day at Sea [164-201.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N23° 10′ 42″ / Appt. Noon, 23 10 42 } Var. 1 Hour, 9·15″ | Equation of Time, decreasing, Add to Mean Time, 0m 22·07s. / Sub. from Appt. Time, 0 22·07 } Var. 1 Hour, 0·513s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 5h 23m 26·88s.

For three hours after we let the Trawl go we had a fresh breeze from East. it fell light at sundown and then backed in to the Southward.

Throughout the night we had light baffling airs and calms at daylight the Islands Oahu in plain sight

at noon we found we had made 36. Miles on our journey

Lat. by Obs., 20°30
Long. by Obs., 168°11
Course by Obs.,
,, by D. R.,
Distance by Obs., 36
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

24th Week.] SATURDAY, 14TH JUNE, 1902. 2 day at Sea [165-200.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, N23° 14′ 9″ / Appt. Noon, 23 14 9 } Var. 1 Hour, 8·13″ | Equation of Time, decreasing, Add to Mean Time 0m 9·68s. / Sub. from Appt. Time, 0 9·68 } Var. 1 Hour, 0·519s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 5h 27m 23·43s.

This day begins with light baffling Southerly airs, and calms Middle part the same, at daylight Oahu is plain sight.

We have spent the past twenty four hours Backing and filling with light airs and calms By Obs. We find that we are five miles more on our Journey

Lat. by Obs., 20°31
Long. by Obs., 158,10
Course by Obs.,
,, by D. R.,
Distance by Obs., 5
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

25th Week.] SUNDAY, 15TH JUNE, 1902 (3rd Sunday after Trinity). 3 day at Sea [166-199.

NAUT. EPHEMERIS, { Sun's Declination increasing, } { Mean Noon, N23° 17′ 12″ / Appt. Noon, 23 17 12 } Var. 1 Hour, 7·10″ | Equation of Time, increasing, Sub. from Mean Time, 0m 2·85s. / Add to Appt. Time, 0 2·85 } Var. 1 Hour, 0·525s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 5h 31m 19·99s.

All this day light Southerly airs and Calms sight, at daylight Oahu in plain

Lat. by Obs., 20°17
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs., 14
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Diriga" from Honolulu to Hilo

25th Week.] MONDAY, 16TH JUNE, 1902. 4 days at Sea [167-198.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, { Mean Noon, N23° 19′ 50″ / Appt. Noon, 23 19 50 } Var. 1 Hour, 6·08″ | Equation of Time, *increasing*, Sub. from Mean Time, 0m 15·50s. / Add to Appt. Time, 0 15·50 } Var. 1 Hour, 0·529s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 5h 35m 16·55s.

Throughout this day light Southerly airs and calms

For the past month the wind has been from the South the greater part of the time

The "Dome" cannot be very far away

We have drifted to the NW. 2 miles Oahu still in sight

Lat. by Obs., 20°30
Long. by Obs., 148 39
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

25th Week.] TUESDAY, 17TH JUNE, 1902. 5 days at Sea [168-197.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, { Mean Noon, N23° 22′ 3″ / Appt. Noon, 23 22 3 } Var. 1 Hour, 5·05″ | Equation of Time, *increasing*, Sub. from Mean Time, 0m 28·24s. / Add to Appt. Time, 0 28·25 } Var. 1 Hour, 0·533s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 5h 39m 13·16s.

All this day light baffling airs and calms

Airs from South to West and this is the region of the V.E. Trade Wind.

We have made sixteen miles during the past day.

Lat. by Obs., 20 14
Long. by Obs., 148.42
Course by Obs.,
,, by D. R.,
Distance by Obs., 16
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, Diriga from Honolulu to Philadelphia

25th Week.] WEDNESDAY, 18TH JUNE, 1902. 6 day at Sea [169-196.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, { Mean Noon, N 23° 23′ 52″ / Appt. Noon, 23 23 52 } Var. 1 Hour, 4·02″ | Equation of Time, *increasing*, Sub. from Mean Time, 0m 41·06s. / Add to Appt. Time, 0 41·07 } Var. 1 Hour 0·535s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 5h 43m 9·66s.

Throughout this day light baffling Winds and calms. Wind baffling all around the compass

This is our 6th day at Sea and we are 93. miles from Honolulu

Lat. by Obs., 19°47
Long. by Obs., 158 38
Course by Obs.,
,, by D. R.,
Distance by Obs., 27
,, by D. R.,
,, by Log,
Current.
Var. used, 10° E
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 28·90
Thermom., Air,
,, Sea,
Hygrometer,

25th Week.] THURSDAY, 19TH JUNE, 1902. 7 days at Sea [170-195.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, { Mean Noon, N23° 25′ 16″ / Appt. Noon, 23 25 16 } Var. 1 Hour, 2·98″ | Equation of Time, *increasing*, Sub. from Mean Time, 0m 53·94s. / Add to Appt. Time, 0 53·95 } Var. 1 Hour, 0·537s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 5h 47m 6·22s.

The first and middle part of this day baffling airs and calms

Latter part light breeze from V.E. Mist squalls.

Lat. by Obs., 18.49
Long. by Obs., 156.14
Course by Obs.,
,, by D. R.,
Distance by Obs., 5-6
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 28 90
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Days' Work Book, "Dirigo" from Honolulu to Philadelphia

25th Week.] FRIDAY, 20TH JUNE, 1902 8th day at Sea [171-194.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, } { Mean Noon, N 23° 26′ 15″ / Appt. Noon, 23 26 15 } Var. 1 Hour, 1·95″ | Equation of Time, *increasing*, Sub. from Mean Time, 1m 6·86s. / Add to Appt. Time, 1 6·86 } Var. 1 Hour, 0·538s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 5h 51m 2·77s.

This day begins with a Light Breeze from E.

Middle part Calm

Latter part Light airs from SSE

We have had the most peculiar looking Sky during the past week; at sunrise and sunset it is a dark crimson and remains so for an hour or two every thing but a breeze

Lat. by Obs., 17° 43
Long. by Obs., 158.17
Course by Obs.,
,, by D. R.,
Distance by Obs., 66
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 28.90
Thermom., Air,
,, Sea,
Hygrometer,

25th Week.] SATURDAY, 21ST JUNE, 1902. 9 days at Sea [172-193.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, } { Mean Noon, N23° 26′ 50″ / Appt. Noon, 23 26 50 } Var. 1 Hour, 0·91″ | Equation of Time, *increasing*, Sub. from Mean Time, 1m 19·78s. / Add to Appt. Time, 1 19·79 } Var. 1 Hour, 0·539s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 5h 54m 59·33s.

Throughout this day light breeze baffling from SSE. to E SE. Where all the Trades and why do we not get a breeze The moon full's to day and I have been in hopes it would bring a change Are the Northeasters upsetting everything the world over. There has been such a glow in the Sky night and morning that it gives one an unnatural feeling The Wind Chart for this month gives fresh Trades here for this ~~month~~ in this Latitude

16 on Log

Lat. by Obs., 16.38
Long. by Obs., 158.21
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R., 64.
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

26th Week.] SUNDAY, 22ND JUNE, 1902. *(4th Sunday after Trinity).* 10th day [173-192.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, } { Mean Noon, N 23° 26′ 59″ / Appt. Noon, 23 26 59 } Var. 1 Hour, 0·12″ | Equation of Time, *increasing*, Sub. from Mean Time, 1m 32·70s. / Add to Appt. Time, 1 32·71 } Var. 1 Hour 0·538s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 5h 58m 55·89s.

This has been an improvement on our previous day's work. We have had a gentle breeze throughout the day. There is a great difference in her steering and sailing when we do have a breeze from what it was last passage.

We have been drilling our new sailors and I think they will be a success but will know more about it after we get around the Horn

They are all fine singers and they give us a concert every evening. I bought them two Sacrapatch Fiddles and an Autoharp and they are flapping

Have had a westerly current of about 15 miles

18 Fay

Lat. by Obs., 14°5·5
Long. by Obs., 158°41
Course by Obs.,
,, by D. R.,
Distance by Obs., 103
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29 89
Thermom., Air,
,, Sea,
Hygrometer,

26th Week.] MONDAY, 23RD JUNE, 1902. 11 day at Sea [174-191.]

NAUT. EPHEMERIS, { Sun's Declination, *decreasing*, } { Mean Noon, N23° 26′ 44″ / Appt. Noon, 23 26 44 } Var. 1 Hour, 1·15″ | Equation of Time, *increasing*, Sub. from Mean Time, 1m 45·59s. / Add to Appt. Time, 1 45·61 } Var. 1 Hour, 0·538s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 6h 2m 52·44s.

This day comes in with gentle Trades which increased to a ~~Breeze~~ that is sending us along 6½ Knots the Ship is steering all right with every thing set

during the middle part. Rain Showers

Latter part fresh Trade Ship Sailed 8 miles per. hour to East from Noon

45 33 64½

Lat. by Obs., 12·34
Long. by Obs., 157·54
Course by Obs., S 18° E
,, by D. R.,
Distance by Obs., 147
,, by D. R.,
,, by Log, 45½
Current.
Var. used, 7°
Dev. used, 3° W
Wind, Direct, East
,, Force,
Sea,
Weather,
Barom., 29-88
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Days' Work Book, "Dirigo" from Honolulu to Philadelphia

26th Week.] TUESDAY, 24TH JUNE, 1902 (St. John Baptist—Midsummer Day). [175-190.]

12 days at Sea

NAUT. EPHEMERIS, Sun's Declination, increasing, Decreasing | Mean Noon, N 23° 26′ 4″ / Appt. Noon, 23 26 4 | Var. 1 Hour, 2·19″ | Equation of Time, increasing, Sub. from Mean Time, 1m 58·44s. / Add to Appt. Time, 1 58·46 | Var. 1 Hour, 0·534s. | Sun's Semi-Diam., 15′ 4″ | Sidereal Time, 6h 6m 49·00s.

Throughout this day fresh Trades. The ship has been going eight knots the greater part of the time and she steers all right. It all goes to show that Mr Lyle did me polite as far as he could in cleaning Res Ottins

Frequent rain squalls during the latter part of the day

Lat. by Obs., 5° 5′ S
Long. by Obs., 154° 5′ W
Course by Obs., S20°E
,, by D. R.,
Distance by Obs., 170
,, by D. R.,
,, by Log, 170
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 25·85
Thermom., Air,
,, Sea,
Hygrometer,

34 Lay

26th Week.] WEDNESDAY, 25TH JUNE, 1902. 13 days at Sea [176 189.]

NAUT. EPHEMERIS, Sun's Declination, increasing, Decreasing | Mean Noon, N 23° 24′ 59″ / Appt. Noon, 23 24 59 | Var. 1 Hour, 3·22″ | Equation of Time, increasing, Sub. from Mean Time, 2m 11·23s. / Add to Appt. Time, 2 11·25 | Var. 1 Hour, 0·531s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 6h 10m 45·56s.

This day comes in with fresh Trades Middle part mod. breezes Latter part squalls of wind and rain

Split Staff Topsail. Main Topgallant Stay Sail and flying Jib and we got quite a shaking up in one of the most severe squalls

Lat. by Obs., 7°40
Long. by Obs., 155°33
Course by Obs., S5°E
,, by D. R.,
Distance by Obs., 156
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather, ~~29.85~~
Barom., 29·85
Thermom., Air,
,, Sea,
Hygrometer,

90 on Log 136

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26th Week.] THURSDAY 26TH JUNE, 1902 14 day at Sea [177-188.]

NAUT. EPHEMERIS, Sun's Declination, decreasing | Mean Noon, N 23° 23′ 30″ / Appt. Noon, 23 23 30 | Var. 1 Hour, 4·25″ | Equation of Time, increasing, Sub. from Mean Time, 2m 23·93s. / Add to Appt. Time, 2 23·95 | Var. 1 Hour, 0·527s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 6h 14m 42·11s.

All the first part of this day squalls of wind and rain with not much wind between the squalls. Rainy southerly sea

Middle part fresh steady breeze.

Latter part fresh breeze with passing clouds

Lat. by Obs., 5°-18 S
Long. by Obs., 153 32 W
Course by Obs., S35°E
,, by D. R.,
Distance by Obs., 175
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29 52
Thermom., Air,
,, Sea,
Hygrometer,

99 Lay

26th Week.] FRIDAY, 27TH JUNE, 1902. 15 days at Sea [178-187.]

NAUT. EPHEMERIS, Sun's Declination, decreasing, | Mean Noon, N 23° 21′ 35″ / Appt. Noon 23 21 35 | Var. 1 Hour, 5·28″ | Equation of Time, increasing Sub. from Mean Time, 2m 36·52s. / Add to Appt. Time, 2 36·54 | Var. 1 Hour, 0·522s. | Sun's Semi-Diam., 15′ 45″ | Sidereal Time, 6h 18m 38·67s.

Throughout this day moderate breeze. Middle part sharp lightning all around the compass heavy clouds passing but not any extra wind in them

Latter part light breeze. Rain clouds to the southward

Lat. by Obs., 8°27
Long. by Obs., 153.06
Course by Obs.,
,, by D. R.,
Distance by Obs., 120
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

H

59 Lay

26th Week.] SATURDAY, 28TH JUNE, 1902. 16 day at sea [179-186]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N23° 19 17″ / Appt. Noon, 23 19 16 } Var. 1 Hour, 6·30″ | Equation of Time, increasing, Sub. from Mean Time, 2m 48·98s. / Add to Appt. Time, 2 49·01 } Var. 1 Hour, 0·516s. | Sun's Semi-Diam., 15′ 45″ | Sidereal Time, 6h 22m 35·2s

First part unsteady winds and rain showers

Middle part calms and light airs from all directions rain showers.

Latter part light breez from S.E. We are within the limits of the S.E. trades and are in hops that this airs is the beginning of them.

Hard lightning all night.

DR

Lat. by Obs.,	2, 25
Long. by Obs.,	153 3
Course by Obs.,	
,, by D. R.,	
Distance by Obs.,	
,, by D. R.,	70
,, by Log,	
Current,	
Var. used,	
Dev. used,	
Wind, Direct,	
,, Force,	
Sea,	
Weather,	
Barom.,	
Thermom., Air,	
,, Sea,	
Hygrometer,	

27th Week.] SUNDAY, 29TH JUNE, 1902. (5th Sunday after Trinity). 17th day at Sea [180-185.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N23° 16′ 33″ / Appt. Noon, 23 16 38 } Var. 1 Hour, 7·33″ | Equation of Time, increasing, Sub. from Mean Time, 3m 1·29s / Add to Appt. Time, 3 1·32 } Var. 1 Hour, 0·509s. | Sun's Semi-Diam., 15′ 45″ | Sidereal Time, 6h 26m 31·7s

Throughout this day gentle breez from S.E. With frequent rain squalls with some extra wind in them

Lat. by Obs.,	1°30′
Long. by Obs.,	153·4
Course by Obs.,	
,, by D. R.,	
Distance by Obs.,	
,, by D. R.,	64
,, by Log,	
Current,	
Var. used,	
Dev. used,	
Wind, Direct,	
,, Force,	
Sea,	
Weather,	
Barom.,	
Thermom., Air,	
,, Sea,	
Hygrometer,	

27th Week.] MONDAY 30TH JUNE, 1902 18 days at Sea [181-184.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing } { Mean Noon, N23° 13′ 25″ / Appt. Noon, 23 13 25 } Var. 1 Hour, 8·35″ | Equation of Time, increasing, Sub. from Mean Time, 3m 13·44s. / Add to Appt. Time, 3 13·46 } Var. 1 Hour, 0·502s. | Sun's Semi-Diam., 15′ 45″ | Sidereal Time, 6h 30m 28·34s.

Throughout this day we have had a light trade wind pleasant weather and a smooth sea

Crossed the equator at 8 am

	Scotts
Lat. by Obs.,	00°10.
Long. by Obs.,	154·25
Course by Obs.,	
,, by D. R.,	
Distance by Obs.,	100
,, by D. R.,	
,, by Log,	
Current,	
Var. used,	
Dev. used,	
Wind, Direct,	
,, Force,	
Sea,	
Weather,	
Barom.,	
Thermom., Air,	
,, Sea,	
Hygrometer,	

43, Say

27th Week.] TUESDAY, 1ST JULY, 1902. 19 day at Sea. [182-183.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N23° 9′ 53″ / Appt. Noon 23 9 52 } Var. 1 Hour, 9·36″ | Equation of Time, increasing Sub. from Mean Time, 3m 25·38s. / Add to Appt. Time, 3 25·41 } Var. 1 Hour, 0·494s. | Sun's Semi-Diam., 15′ 45″ | Sidereal Time, 6h 34m 24·90s.

All this day light trades and pleasant weather

Lat. by Obs.,	1°52
Long. by Obs.,	154·34
Course by Obs.,	
,, by D. R.,	
Distance by Obs.,	104
,, by D. R.,	
,, by Log,	
Current,	104
Var. used,	
Dev. used,	
Wind, Direct,	
,, Force,	
Sea,	
Weather,	
Barom.,	
Thermom., Air,	
,, Sea,	
Hygrometer,	

44, Say

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27th Week.] WEDNESDAY, 2ND JULY, 1902. 20 day's at Sea [183-182

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N23° 5′ 50″ / Appt. Noon, 23 5 55 } Var. 1 Hour, 10·37″ | Equation of Time, increasing, Sub. from Mean Time, 3m 37·12s. / Add to Appt. Time, 3 37·15 } Var. 1 Hour, 0·484s. | Sun's Semi-Diam., 15′ 45″ | Sidereal Time, 6h 38m 21·9s

First part of this day light breeze
Middle part calm with rain showers
Latter part moderate breeze
Weather very warm and sultry

37 Lgs

Lat. by Obs., 3°40
Long. by Obs., 154 5
Course by Obs.,
,, by D. R.,
Distance by Obs., 108
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

27th Week.] THURSDAY, 3RD JULY, 1902. 21 day's at Sea [184-181

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N23° 1′ 35″ / Appt. Noon, 23 1 34 } Var. 1 Hour, 11·38″ | Equation of Time, increasing, Sub. from Mean Time, 3m 48·61s / Add to Appt. Time, 3 48·64 } Var. 1 Hour, 0·473s. | Sun's Semi-Diam., 15′ 45″ | Sidereal Time, 6h 42m 18·0s

Throughout this day light
Unsteady Trades

5 P.M. Sighted Malden Island.

The highest part of the island is 30 feet above Sea level The "Emmeline" was Wrecked there four Years ago.
There were two Buildings on the island

30 1/2 Lgs

Lat. by Obs., 4°54
Long. by Obs., 158° 2
Course by Obs.,
,, by D. R.,
Distance by Obs., 75
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

Week.] FRIDAY, 4TH JULY, 1902. 22 days at Sea [185-180.]

EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N22° 56′ 50″ / Appt. Noon, 22 56 49 } Var. 1 Hour, 12·39″ | Equation of Time, increasing, Sub. from Mean Time, 3m 59·82s / Add to Appt. Time, 3 59·86 } Var. 1 Hour, 0·461s. | Sun's Semi-Diam., 15′ 45″ | Sidereal Time, 6h 46m 14·57s.

Throughout this day light airs
and calms
At 1 P.M. we were close
to Starbuck's Island.
and had hundreds
of birds around the ship screaming
as all they were worth

We are five day's sailing South of the Equator
in time, & 338 Miles in distance

Lat. by Obs., 5°38
Long. by Obs., 156.23
Course by Obs.,
,, by D. R.,
Distance by Obs., 74
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

89 Lgs

Week.] SATURDAY, 5TH JULY, 1902. 23 day at Sea [186-179.]

EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N22° 51′ 40″ / Appt. Noon, 22 51 39 } Var. 1 Hour, 13·38″ | Equation of Time, increasing, Sub. from Mean Time, 4m 10·74s. / Add to Appt. Time, 4 10·77 } Var. 1 Hour, 0·449s. | Sun's Semi-Diam., 15′ 45″ | Sidereal Time, 6h 50m 11·13s.

Throughout this day light
air from S E. by S. just enough
to give the Ship Steerage way
The log has registered 20. Miles
and we have had 20. Miles
Westerly current. If this state
of affairs keeps up You all will
be wondering what has become
of this Clipper Ship again
& on Lgs

Lat. by Obs., 5°54
Long. by Obs., 157°07
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

28th Week.] SUNDAY, 6TH JULY, 1902. (6th Sunday after Trinity). 24 days at Sea [187-178.

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N 22° 46' 7" / Appt. Noon, 22 46 6 } Var. 1 Hour, 14·37" | Equation of Time, increasing, Sub. from Mean Time, 4m 21·35s. / Add to Appt. Time, 4 21·38 } Var. 1 Hour, 0·435s. | Sun's Semi-Diam., 15' 45" | Sidereal Time, 6h 54m 7·9s

All this day we have been favored with light Easterly air's. Weather very warm and sultry. The log has only registered 11 Miles. It was new Moon yesterday and we are in hope it may bring a change.
With the light air and Westerly Current combined we have changed our position 41. Miles.
23

Lat. by Obs., 6° 2[illegible]
Long. by Obs., 18[illegible]
Course by Obs.,
,, by D. R.,
Distance by Obs., 41
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

28th Week.] MONDAY, 7TH JULY, 1902. 25 day's at Sea [188-177.

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N 22° 40' 11" / Appt. Noon, 22 40 9 } Var. 1 Hour, 15·36" | Equation of Time, increasing, Sub. from Mean Time, 4m 31·61s. / Add to Appt. Time, 4 31·64 } Var. 1 Hour, 0·420s. | Sun's Semi-Diam., 15' 45" | Sidereal Time, 6h 58m 4·24s

We have been fanning along with a light air from East all this day. The heat is very oppressive. Sharp lightning from dark to day light

76 Log

Lat. by Obs., 7, 3[illegible]
Long. by Obs., 157.[illegible]
Course by Obs.,
,, by D. R.,
Distance by Obs., 75.
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

8th Week.] TUESDAY, 8TH JULY, 1902. 26 day's At Sea [189-176.]

UT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N 22° 33' 50" / Appt. Noon, 22 33 49 } Var. 1 Hour, 16·34" | Equation of Time, increasing, Sub. from Mean Time, 4m 41·49s. / Add to Appt. Time, 4 41·52 } Var. 1 Hour, 0·404s. | Sun's Semi-Diam., 15' 45" | Sidereal Time, 7h 2m 0·80s.

We still continue to drift along with a light E by E. air; and it is getting very monotonous to say the least.
We will be raising a new crop of barnacles if we do not get a move on the ship soon.

28 1/2 Log

Lat. by Obs., 8° 30
Long. by Obs., 156° 37
Course by Obs.,
,, by D. R.,
Distance by Obs., 64
,, by D. R.,
,, by Log, 57
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air, 24 / 28 / 32
,, Sea,
Hygrometer,

8th Week.] WEDNESDAY, 9TH JULY, 1902. 27 day's at Sea [190-175.]

UT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N 22° 27' 7" / Appt. Noon, 22 27 5 } Var. 1 Hour, 17·31" | Equation of Time, increasing, Sub from Mean Time, 4m 50·98s. / Add to Appt. Time, 4 51·01 } Var. 1 Hour, 0·387s. | Sun's Semi-Diam., 15'45" | Sidereal Time, 7h 5m 57·35s.

Light & V.E. air. the first part. Middle part Calm. Ship without steerage way. Sharp lightning throughout the night. Latter part light breeze from East. Heavy swell running from South which retards what little push the light air's give us

30. on Log

Lat. by Obs., 9°07
Long. by Obs., 156°39
Course by Obs.,
,, by D. R.,
Distance by Obs., 37'
,, by D. R.,
,, by Log, 22
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

28th Week.] THURSDAY, 10TH JULY, 1902 28 day at Sea [191-174.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N 22° 20′ 0″ / Appt. Noon, 22 19 58 } Var. 1 Hour, 18·28″ | Equation of Time, increasing, Sub. from Mean Time, 5m 0·05s. / Add to Appt. Time, 5 0·08 } Var. 1 Hour, 0·369s. | Sun's Semi-Diam., 15′ 45″ | Sidereal Time, 7h 9m 53·91s.

First part of this day light airs and calms
Middle part much the same
Latter part gentle breeze from E.N.E.
We have had a little Current Setting S.S.W.

8. Log

Lat. by Obs., 10° 28
Long. by Obs., 157.50
Course by Obs.,
,, by D. R.,
Distance by Obs., 75
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

28th Week.] FRIDAY, 11TH JULY, 1902. 29 days at Sea [192-173.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N 22° 12′ 30″ / Appt. Noon, 22 12 28 } Var. 1 Hour, 19·23″ | Equation of Time, increasing, Sub. from Mean Time, 5m 8·70s. / Add to Appt. Time, 5 8·73 } Var. 1 Hour, 0·331s. | Sun's Semi-Diam., 15′ 45″ | Sidereal Time, 7h 13m 50·46s.

First part Light Breeze from E.N.E.
Middle part mist squalls from S.E. by South - "Interesting"
Latter part Light Breeze from E.S.E. Overcast.

74 Log

Lat. by Obs., 11.25
Long. by Obs., 153.00
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R., 65
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

28th Week.] SATURDAY, 12TH JULY, 1902. 30 day's at Sea [193-172.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N 22° 4′ 37″ / Appt. Noon 23 14 35 } Var. 1 Hour, 20·18″ | Equation of Time, increasing, Sub. from Mean Time 5m 16·89s. / Add to Appt. Time, 5 16·92 } Var. 1 Hour, 0·332s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 7h 17m 47·02s.

Throughout this day we have had a moderate trade wind and we have sailed 116 miles. I think the Trade winds have gotten back off from this vacation and may give us a little push along
We are thirty day's at sea and have averaged about 67.8 miles per. day since we started.
It makes a fellow think that he is forgotten and feel as if he would like to get out and walk.

85. Log

Lat. by Obs., 13° 13
Long. by Obs., 157. 44
Course by Obs.,
,, by D. R., 1
Distance by Obs., 116'
,, by D. R.,
,, by Log, 111
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29. 85
Thermom., Air,
,, Sea,
Hygrometer,

29th Week.] SUNDAY, 13TH JULY, 1902 (7th Sunday after Trinity). 31 day's at Sea [194-171.

NAUT. EPHEMERIS, { Sun's Declination decreasing, } { Mean Noon, N 21° 56′ 21″ / Appt. Noon, 21 56 19 } Var. 1 Hour, 21·12″ | Equation of Time, increasing, Sub. from Mean Time, 5m 24·62s. / Add to Appt. Time, 5 24·65 } Var. 1 Hour, 0·312s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 7h 21m 43·58s.

All this day gentle Trade wind and fine pleasant weather

89

Lat. by Obs., 15.12
Long. by Obs., 157.58
Course by Obs., S70W
,, by D. R.,
Distance by Obs., 120
,, by D. R.,
,, by Log, 104
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29.99
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

29th Week.] MONDAY, 14TH JULY, 1902. 32 and ½ day at Sea [195-170.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N21° 47′ 43″ / Appt. Noon, 21 47 41 } Var. 1 Hour, 22·06″ | Equation of Time, increasing, Sub. from Mean Time, 5m 31·87s. / Add to Appt. Time, 5 31·90 } Var. 1 Hour, 0·292s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 7h 25m 40·14s.

We have had the same Light Trade throughout this day. The Ship worrying along few miles per hour. The finest kind of weather and bright moonlight nights. We had a concert last Eve. My Natives sang all the Hawaiian Songs. and I enjoyed it very much. They are like a lot of Children. and they are the happiest people I ever had on board a Ship

82 Lay

Lat. by Obs., 16° 43′ S
Long. by Obs., 168° 16′
Course by Obs., S 14° W
,, by D. R.,
Distance by Obs., 91
,, by D. R.,
,, by Log, 94
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29°85′
Thermom., Air,
,, Sea,
Hygrometer,

29th Week.] TUESDAY, 15TH JULY, 1902. 33 day's at Sea [196-169.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N21° 28′ 43″ / Appt. Noon, 21 38 40 } Var. 1 Hour, 22·99″ | Equation of Time, increasing, Sub. from Mean Time, 5m 38·62s. / Add to Appt. Time, 5 38·65 } Var. 1 Hour, 0·271s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 7h 29m 36·69s.

Throughout this day Light Trades and pleasant weather

76

Lat. by Obs., 18° 04′
Long. by Obs., 159° 20′
Course by Obs., S 36 W
,, by D. R.,
Distance by Obs.,
,, by D. R., 104
,, by Log, 94
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30. 02
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

29th Week.] WEDNESDAY, 16TH JULY, 1902. 34 day's at sea [197-168.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N21° 29′ 2″ / Appt. Noon 21 29 18 } Var. 1 Hour, 23·90″ | Equation of Time, increasing, Sub. from Mean Time 5m 44·87s. / Add to Appt. Time, 5 44·89 } Var. 1 Hour, 0·249s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 7h 33m 33·25s.

First and middle part Light Trades

at 4 PM. sighted the island Aitutaki: one of the Hervey group: bearing S ½ W. 80. miles off at midnight it was bearing E by N. 7. miles distant

Latter part of the day light breeze from E by E. fine weather.

Rarotonga Lat 21. 11. 35; South Lon 159° 47′

66. Lay

Lat. by Obs., 19. 57
Long. by Obs., 159° 37′
Course by Obs.,
,, by D. R.,
Distance by Obs., 112
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

29th Week.] THURSDAY, 17TH JULY, 1902. 35 day's at Sea [198-167.

NAUT. EPHEMERIS, { Sun's Declination decreasing, } { Mean Noon, N21° 19′ 36″ / Appt. Noon, 21 19 33 } Var. 1 Hour, 24·81″ | Equation of Time, increasing, Sub. from Mean Time, 5m 50·60s. / Add to Appt. Time, 5 50·62 } Var. 1 Hour, 0·228s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 7h 37m 29·80s.

All this Day. Light Breezes. And Fine Pleasant Weather.

Wind swinging from E by E. to North.

Sighted two Schooners standing to the westward during the latter part of the day.

Mangaia Lat 21. 55. Lon 157° 57′

South 122° E. @ 7.25 am

1 on Lay

Lat. by Obs., 21° 25′
Long. by Obs., 157° 19′
Course by Obs., S 39° E
,, by D. R.,
Distance by Obs., 119
,, by D. R.,
,, by Log, 113
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29-85
Thermom., Air, ~~29.85~~
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

29th Week.] FRIDAY, 18TH JULY, 1902. 36 day's at Sea [199-166.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N21° 9′ 29″ / Appt. Noon, 21 9 27 } Var. 1 Hour, 25·71″ | Equation of Time, increasing, Sub. from Mean Time, 5m 55·81s. / Add to Appt. Time, 5 55·83 } Var. 1 Hour, 0·206s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 7h 41m 26·36s.

This day comes in with a gentle breeze from N.NE.

At 2. PM. sighted the Island Mangaia bearing S.E. distance 27. miles passed within seven miles of the Village of Oneroa at 6. PM. saw several large houses and it had the appearance of being quite a large town.

It is one of the most productive Island in the South Pacific only there is not any anchorage and every thing has to be shipped to Vessels stand off and on. We got along to Lato in the day to have the Canoes come off to us. We there passed three Islands the same way At 2. am the wind shifted E.S.E. in a rain squall. The day ends.

15. Ly

Lat. by Obs., 22. 45
Long. by Obs., 157°03
Course by Obs., S 41° E
,, by D. R.,
Distance by Obs., 108
,, by D. R.,
,, by Log, 114
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.95
Thermom., Air,
,, Sea,
Hygrometer,

29th Week.] SATURDAY, 19TH JULY, 1902. 37 days at Sea [200-165.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N20° 59′ 2″ / Appt. Noon, 20 58 59 } Var. 1 Hour, 26·60″ | Equation of Time, increasing, Sub. from Mean Time, 6m 0·48s. / Add to Appt. Time, 6 0.50 } Var. 1 Hour, 0·183s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 7h 45m 22·92s.

DR

First part baffling winds and rain Middle part light breeze from SSE. to South constant rain.

Latter part unsteady wind with rain Wind shifting from S. to SSE and back again

96 Ley

Lat. by ~~Obs.~~, 23.15
Long. by ~~Obs.~~, 153.44
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log, 80
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.97
Thermom., Air,
,, ~~Sea~~,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

30th Week.] SUNDAY, 20TH JULY, 1902. (8th Sunday after Trinity). 38 day's at Sea [201-164.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N20° 48′ 13″ / Appt. Noon, 20 48 10 } Var. 1 Hour, 27·49″ | Equation of Time, increasing, Sub. from Mean Time, 6m 4·61s. / Add to Appt. Time, 6 4·62 } Var. 1 Hour 0·160s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 4h 49m 19·47s.

First and Middle part of this day light breezes from South to SSE. Wind very unsteady: overcast and frequent mist squalls.

Latter part almost Calm. and occasional Cats paw of air from South

74 Ley

Lat. by Obs., 23.11
Long. by Obs., 153.06
Course by Obs.,
,, by D. R.,
Distance by Obs., 145
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29.95
Thermom., Air,
,, Sea,
Hygrometer,

30th Week.] MONDAY, 21ST JULY, 1902. 39 day's at sea [202-163.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N20° 37′ 3″ / Appt. Noon, 20 37 0 } Var. 1 Hour, 28·36″ | Equation of Time, increasing, Sub. from Mean Time, 6m 8·19s. / Add to Appt. Time, 6 8·20 } Var. 1 Hour, 0·138s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 7h 53m 16·03s.

This day begins with light unsteady air's and calm's with mist squall's. 5. PM. light breeze came from South which continued throughout the remainder of the day.

27. Ly

Lat. by Obs., 23°31
Long. by Obs., 151.59
Course by Obs., S 72° E
,, by D. R., 47
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.04
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Days' Work Book, "Dirige" from Honolulu to Philadelphia

30th Week.] TUESDAY, 22ND JULY, 1902 40 day's at Sea [203-162.]

NAUT. EPHEMERIS. | Sun's Declination, decreasing, | Mean Noon, N 20° 25' 32" / Appt. Noon, 20 25 29 | Var. 1 Hour, 29·22" | Equation of Time, increasing, Sub. from Mean Time, 6m 11·22s. / Add to Appt. Time, 6 11·23 | Var. 1 Hour 0·115s. | Sun's Semi-Diam., 15' 46" | Sidereal Time, 7h 57m 12·58s.

Throughout this day

Light Southerly airs & Calms

Forty day's at Sea
And 46 degrees South of where we started from

Lat. by Obs., 23·39
Long. by Obs., 151.20
Course by Obs.,
,, by D. R.,
Distance by Obs., 30'
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.03
Thermom., Air,
,, Sea,
Hygrometer,

30th Week.] WEDNESDAY, 23RD JULY, 1902. 41 day's at Sea. [204-161.]

NAUT. EPHEMERIS. | Sun's Declination, decreasing, | Mean Noon, N20° 13' 40" / Appt. Noon, 20 13 37 | Var. 1 Hour, 30·07" | Equation of Time, increasing, Sub. from Mean Time, 6m 13·69s. / Add to Appt. Time, 6 13·69 | Var. 1 Hour, 0·091s. | Sun's Semi-Diam., 15' 46" | Sidereal Time, 8h 1m 9·14s.

First and middle part of this day light baffling airs and calms

Latter part brisk breeze from SSE. to SE. Heavy swell running from SW.

Lat. by Obs., 2 43'
Long. by Obs.,
Course by Obs.,
,, by D. R., S 48°W
Distance by Obs., 66'
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct, SSE
,, Force,
Sea,
Weather,
Barom., 30.03
Thermom., Air,
,, Sea,
Hygrometer,

E. Ley.

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

30th Week.] THURSDAY, 24TH JULY, 1902. 42 day's at Sea [205-160.]

NAUT. EPHEMERIS. | Sun's Declination, decreasing, | Mean Noon, N 20° 1' 28" / Appt. Noon, 20 1 25 | Var. 1 Hour, 30·91" | Equation of Time, increasing, Sub. from Mean Time, 6m 15·59s. / Add to Appt. Time, 6 15·60 | Var. 1 Hour 0·067s. | Sun's Semi-Diam., 15' 46" | Sidereal Time, 8h 5m 5·69s.

All this day Moderate breeze from SSE. and SE. which is another spurt of the South East trades. We have had an exceedingly moderate time since leaving Honolulu and it is very trying on me. In fact it upsets every thing fore and aft. Jokeing along day after day as we have been doing will spoil most anybody

Lat. by Obs., 25·43
Long. by Obs., 152·40
Course by Obs., S 41°W
,, by D. R.,
Distance by Obs., 120
,, by D. R.,
,, by Log, 114
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.09
Thermom., Air,
,, Sea,
Hygrometer,

23 Ley

30th Week.] FRIDAY, 25TH JULY, 1902. 43 day's at Sea [206-159.]

NAUT. EPHEMERIS. | Sun's Declination, decreasing, | Mean Noon, N19° 48' 57" / Appt. Noon, 19 48 53 | Var. 1 Hour, 31·75" | Equation of Time, increasing, Sub. from Mean Time, 6m 16·93s. / Add to Appt. Time, 6 16·93 | Var. 1 Hour, 0·044s. | Sun's Semi-Diam., 15' 46" | Sidereal Time, 8h 9m 2·25s.

Throughout this day Moderate to light breeze from SSE. to SE by E fine pleasant weather

Heavy swell from the Southard Note the progress this Clipper Ship is Making and wonder why she does not get there. It is enough to give a man softening of the brain. To all hes ge.

Lat. by Obs., 27° 16
Long. by Obs.,
Course by Obs. 154° 21
,, by D. R., S 23W
Distance by Obs., 107'
,, by D. R.,
,, by Log, 107
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.15
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Days' Work Book, "Dirigo" from Honolulu to Philadelphia

30th Week.] SATURDAY, 26TH JULY, 1902 44 day's at Sea [207-158.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N 19° 36′ 5″ / Appt. Noon, 19 36 1 } Var. 1 Hour, 32·57″ | Equation of Time, increasing, Sub. from Mean Time, 6m 17·70s. / Add to Appt. Time, 6 17·70 } Var. 1 Hour, 0·020s. | Sun's Semi-Diam., 15′ 46″ | Sidereal Time, 8h 12m 58·81s.

The first and middle part of this day Moderate breeze

Latter part Wind E N E fresh breeze and overcast

Lat. by Obs., 29.° 49
Long. by Obs., 153.° 39
Course by Obs., S 13° E
,, by D. R.,
Distance by Obs., 158
,, by D. R..
,, by Log, 146
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30164
Thermom., Air,
,, Sea,
Hygrometer,

69 Lay

31st Week.] SUNDAY, 27TH JULY, 1902. (9th Sunday after Trinity). 45 days at Sea [208-157.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N 19° 22′ 53″ / Appt. Noon, 19 22 50 } Var. 1 Hour, 33·38″ | Equation of Time, increasing, Sub. from Mean Time, 6m 17·89s. / Add to Appt. Time, 6 17·89 } Var. 1 Hour, 0·004s. | Sun's Semi-Diam., 15′ 47″ | Sidereal Time, 8h 16m 55·36s.

First part a strong breeze which increased to a gale with heavy squalls of wind and rain Wind N N E.
Middle part the same.
Latter part moderated and hauled to W N W

Dr

Lat. by Obs., 32·35
Long. by Obs., 157.55
Course by Obs.,
,, by D. R., 189
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29 60
Thermom., Air,
,, Sea,
Hygrometer,

98

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st Week.] MONDAY 28TH JULY, 1902. 46 day at Sea. [209-156.]

. EPHEMERIS, { Sun's Declination, decreasing } { Mean Noon, N19° 9′ 23″ / Appt. Noon, 19 9 19 } Var. 1 Hour, 34·18″ | Equation of Time, decreasing, Sub. from Mean Time, 6m 17·51s. / Add to Appt. Time, 6 17·51 } Var. 1 Hour, 0·00[illegible]s. | Sun's Semi-Diam., 15′ 47″ | Sidereal Time, 8h 20m 51·92s.

1
T
First and middle part light
T Unsteady winds and rain squalls
13
13 Latter part Moderate breeze with a
Cross Sea running

Lat. by Obs., 33°39
Long. by Obs., 149. 40
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log, 125
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 2965
Thermom., Air,
,, Sea,
Hygrometer,

1st Week.] TUESDAY, 29TH JULY, 1902. 47 days at Sea [210-155.]

(UT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N18° 55′ 33″ / Appt. Noon 18 55 29 } Var. 1 Hour, 34·97″ | Equation of Time, decreasing Sub. from Mean Time, 6m 16·55s. / Add to Appt. Time, 6 16·55 } Var. 1 Hour, 0·052s. | Sun's Semi-Diam., 15′ 47″ | Sidereal Time, 8h 24m 48·47s.

First part wind S W. squally not much wind between squalls
Middle part much the same
Latter part fresh steady breeze from S W. with passing clouds with a Sea running from S W.

Lat. by Obs., 34 55
Long. by Obs., 142.28
Course by Obs., S 73° W
,, by D. R.,
Distance by Obs.,
,, by D. R., 168
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29 88
Thermom., Air,
,, Sea,
Hygrometer,

I

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

31st Week.] WEDNESDAY, 30TH JULY, 1902. 46 day's at Sea [211-154.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N18° 41′ 24″ / Appt. Noon, 18 41 20 } Var. 1 Hour, 35·75″ | Equation of Time, decreasing, Sub. from Mean Time, 6m 15·01s. / Add to Appt. Time, 6 15·01 } Var. 1 Hour, 0·076s. | Sun's Semi-Diam., 15′ 47″ | Sidereal Time, 8h 28m 45·03s.

This day begins with a fresh breeze from S.W. Which fell light toward the middle part and hauled to West.

Latter part moderate breeze from W.N.W. with pleasant weather. We are 15 day's behind our last passage from Honolulu

Lat. by Obs., 35 50
Long. by Obs., 143° 36
Course by Obs., S 58 E
,, by D. R.,
Distance by Obs., 154
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30 02
Thermom., Air,
,, Sea,
Hygrometer,

31st Week.] THURSDAY, 31st JULY, 1902. 47 day's at Sea. [212-153.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N18° 26′ 57″ / Appt. Noon, 18 26 53 } Var. 1 Hour, 36·51″ | Equation of Time, decreasing, Sub. from Mean Time, 6m 12·89s. / Add to Appt. Time, 6 12·88 } Var. 1 Hour, 0·101s. | Sun's Semi-Diam., 15′ 47″ | Sidereal Time, 8h 32m 41·58s.

Throughout this day fresh breeze and pleasant weather

13 on Log

Lat. by Obs., 36° 55
Long. by Obs., 135° 4
Course by Obs., S 69° E
,, by D. R.,
Distance by Obs., 196
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.08
Thermom., Air,
,, Sea,
Hygrometer,

S 1472 @ 9.20 E 1/2 S

29

8.8 W

18.02.03 = 14.03
18.02 57 14 08
18.05 56 14 35
3 45 7
18.02 11 14 42
8 26 13 35 48
9 35 58 108.38
139 08
79 34
14 42
64.52
.0 9 0 9 4
.0 2 3 3 8
4.2 5 7 9 0
4.9 5 6 8 0
9.3 2 9 0 2
8, 19 5 7
4 1 6
8 26 13

18 49. 04. 21.19
18 50 54 21.28
18 51 40 21 34
3 45 10
18.47.53. 21 46
35 48
108 38
168.12
88.06
25 46
57 20
.0 9 0 9 4
.0 2 3 3 8
4.9 2 7 1 0
4.9 3 4 5 7
9 9 7 5 9 9
9.36 40

143.53
2

S 46° E
159.

S 1472 Comp
S 1412 True 6° E. Error

18.41.28
5 36
18 35 38
90 2 24
108.38.22

6.15.01
1 00
+6.16.00

89 50
35 21
54 29
14 32
35.53

7.30.W

17.33.54 7.20
17.34 54 7.30
3 43 4
17.31.11. 7.34
86 51
104.24
152 49
76 24
7 34
68 50
.10 2 5 8
.0 2 2 9 9
.0 9 6 8 0
.0 2 2 7 9
4.3 7 1 3 3
4.9 4 8 5 4
9,479 5-0

7.52.W 78 Leg

17.36 49. 7.39

140.11
30
139.41
34 59
83 30

138.41
143 30
3 45
162
229

Lat Dep
69 145.8

S 69° E 154

24
73
13 Leg

18.26.53
5 30
18 21 23
90 2 24
108.23.47

6.12.48
1
+6 13

89 50
34 36
55 20
18 21
36.59
11
34 48

37° 38' 138° 41'
1 7 3 38
37.44 = 136.03

218 Lm 3

Sat
99

37
17
499

36.39
38 18
7 38

S 44° E

139 38
4 11
135.27

4.11

18.12.08
5 36
18 06 32

8990
8025
3625
147
3818

223

S 44 E 223

38.18. 135.27
1 15 2 44
39.33 132.40

7.35.W 90.Log
16.53.40. 8.42
16.54 39 8.53
3.42 5
16.50.57 = 8.58
8 00.31 39.33
8 49 26 107.53
156 24
78 12
8 58
69 14

120 15
12 5
132.21

.11291
.02157
4.31066
9.97083
9.41593

7.54.24
6 5
8 00 31

39.33=132.40
3 12
39.34 132.28

S.02W 98½ Log
18.00.00 18.46
18.00 48. 18.55
18.01 32 18.03
3.42 8
17.37.30 = 19.11
8 08 40 39.34
8 49 10 107.53
166 40
83 20
19 11
44 09

.11322
.02151
4.04481
4.85421
9.15375

8.02.35
6 05
8 08 40

17.57.30. 19.11
8.08.30 39.34
8 49.20 +07.53
166 38
120 15 83 29
12 5 19.11
132 20 64.08
34
131.49

.11301
.02151
4.06589
4.95415
9.15456

8.02.25
6 5
8.08.30

39.42. 131.49
40 2 49
40.02 129 00
31

39,42 = 131=49
38 18 135 27
1 24 3 38
Sat Dep. 180
84 169 218

S 63.30 E 190'

17.54.05
5 36
17.50.29
50.02 36
107.53.05

6.06.20
1.24
6.4.56
42
+6.4.98
89 54
8990
3218
5732
1730
39.42
6
2934

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

31st Week.] FRIDAY 1ST AUGUST, 1902. 50. day's at Sea [213-152.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing } { Mean Noon, N18° 12' 12" / Appt. Noon, 18 12 8 } Var. 1 Hour, 37·26" | Equation of Time, decreasing, Sub. from Mean Time, 6m 10·18s. / Add to Appt. Time, 6 10·17 } Var. 1 Hour 0·125s. | Sun's Semi-Diam., 15' 47" | Sidereal Time, 8h 36m 38·14s.

First part fresh breeze, pleasant wind N.W.
Middle part Wind North fresh breeze with overcast weather and rain
Latter part fresh breeze from N.N.E. overcast

37½

Lat. by Obs., 38° 14
Long. by Obs., 135° 27'
Course by Obs., S. 64° E
,, by D. R.,
Distance by Obs., 223'
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30 80
Thermom., Air,
,, Sea,
Hygrometer,

31st Week.] SATURDAY, 2ND AUGUST, 1902. 51 day's at sea [214-151.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N17° 57' 9" / Appt Noon 17 57 5 } Var. 1 Hour, 38·00" | Equation of Time, decreasing Sub. from Mean Time, 6m 6·88s. / Add to Appt. Time, 6 6·86 } Var. 1 Hour, 0·150s. | Sun's Semi-Diam., 15' 47" | Sidereal Time, 8h 40m 34·69s.

This day begins with a strong breeze from N.N.E. Which increased to a gale, blowing hard for several hours. During the middle watch the wind shifted to W.N.W. in a rain squall and moderated to a fresh breeze.

Latter part of the day fresh breeze from W.N.W. Weather pleasant. Heavy Westerly sea running

23.

Lat. by Obs., 39° 42'
Long. by Obs., 131° 49'
Course by Obs., S 63.30 E
,, by D. R.,
Distance by Obs., 190
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29·40
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

32nd Week.] SUNDAY, 3RD AUGUST, 1902 (10th Sunday after Trinity). 52 day at Sea [215-150.

NAUT. EPHEMERIS,	Sun's Declination, decreasing,	Mean Noon, N17° 41′ 48″ / Appt. Noon, 17 41 44	Var. 1 Hour, 38·73″	Equation of Time, decreasing, Sub. from Mean Time, 6m 2·98s. / Add to Appt. Time, 6 2·96	Var. 1 Hour, 0·175s.	Sun's Semi-Diam., 15′ 47″	Sidereal Time, 8h 44m 31·24s.

First part of this day fresh breze from W S W

Middle part Moderate with clear pleasant Weather.

Latter part light air's from West with a heavy S W sea causing the ship to roll and fill her decks every time while

54

Lat. by Obs., 40.04
Long. by Obs., 128°60
Course by Obs., S72°c
,, by D. R.,
Distance by Obs., 111
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air, 29.73
,, Sea,
Hygrometer,

32nd Week.] MONDAY, 4TH AUGUST, 1902. 53 day's at Sea [216-149.]

NAUT. EPHEMERIS,	Sun's Declination, decreasing,	Mean Noon, N17° 26′ 10″ / Appt. Noon, 17 26 6	Var. 1 Hour, 39·44″	Equation of Time, decreasing, Sub. from Mean Time, 5m 58·47s / Add to Appt. Time, 5 58·45	Var. 1 Hour, 0·200s.	Sun's Semi-Diam., 15′ 47″	Sidereal Time, 8h 48m 27·80s.

First and middle part of this day light-air's and Calm's

Latter part the Wind Hauled East then S S E and breezed up increasing to a gale with constant rain

Lat. by Obs., 40.48
Long. by Obs., 128,36
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air, 29.45
,, Sea,
Hygrometer,

8.45; W. 42. Log.

2

17. 40 46. 1738

17. 39. 57. 18.06
3 47 40.08
8 36 10 107 39
129 2.30 146 53
12 8 34 6
128.30 18 06
6 5 10
.11640
.02094
4.08999
4.95468
9.18421
7 55. 55
4
8 01 54

17. 42. 11 17. 44
17. 48 30. 17 58
3 33 6
17 39 37 18 06
3 4 40 22
4 34 51 107 39
129.13 146 07
8. 57.03 43 03
6 1 18 06
9 03 06 4 45 7
.11640
.02094
4.08999
4.94923
9.17674
8 57.44
4
5 03 44

.11809
.02094
4.08280
4.95710
9.17893

17. 41. 44
5 34
17 34 08
90 2.34
107. 38. 44

4 02. 91
1
+6. 1. 91

38.42 183.49
4008 128.36
2 55
135

8950
3206
5744
17 34
40.08

Lat
34-106

S 72° 111

32nd Week.] TUESDAY, 5TH AUGUST, 1902. 54 day's at sea [217-148.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N17 °10′ 15″ / Appt. Noon, 17 10 11 } Var. 1 Hour, 40·14″ | Equation of Time, decreasing, Sub. from Mean Time, 5m 53·36s. / Add to Appt. Time, 5 53·34 } Var. 1 Hour, 0·226s. | Sun's Semi-Diam., 15′48″ | Sidereal Time. Sh 52m 24·35s.

This day begins with a fresh gale from ESE. at 6 Pm the wind hauled to south were ship to ESE.
Constant rain and a high sea
During the middle part the wind moderated except squalls of wind and rain not any wind between the squalls
Latter part wind south clear weather and light breeze

Lat. by Obs., 40°30
Long. by Obs., 124.00
Course by Obs.,
,, by D. R.,
Distance by Obs., 91
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29.70
Thermom., Air,
,, Sea,
Hygrometer,

32nd Week.] WEDNESDAY, 6TH AUGUST, 1902. 55 day's at Sea [218-147.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N16° 54′ 3″ / Appt. Noon, 16 53 59 } Var. 1 Hour, 40·32″ | Equation of Time, decreasing, Sub from Mean Time, 5m 47·64s. / Add to Appt. Time, 5 47·62 } Var. 1 Hour, 0·231s. | Sun's Semi-Diam., 15′48″ | Sidereal Time, 8h 56m 20·91s.

First part light unsteady breeze from South with frequent rain squalls
Middle part light air's calm at times
Latter part airs from SW to West pleasant weather smooth sea

Lat. by Obs., 40 46
Long. by Obs., 124°28
Course by Obs.,
,, by D. R.,
Distance by Obs., 70
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.20
Thermom., Air,
,, Sea,
Hygrometer,

78

10. 32.01 24.52
3 33 S
10. 28.28 23 01
S 40 36 40 36
8 47 52 104 09
17240
120 45 86.20
1 13 23 01
13.1.34 61 19
.11859
.01975
8.80585
8.84314
8.88733
S. 34.44
3 32
S 40 34

65 Log 7.57.W 8 Sam S 133° E. Head E by S
16.30.32 9.41
14 31 27 9 49
14 32 13 9 57
3 33
16. 28.40 = 10 04
8 16 31 40 43
8 12 08 106.66
13.7 43
7 48 51
10 04
8.47
.12036
.01925
4.41722
4.95461
9.49334
.12036
.01923
4.28641
4.99552
9.33354
809.44
3 44
8 13 31

40.48 128.30
124 30
2 W

17.10.11
S 36
17.04 35
SW 2 34
107.8 71

5.53.34
1
+6.52
8950
8216
5734
1704
40,30

16.28.40 10.04
8 6 31 4043
8 22 09 106.56
15748
7857
10.04
68 47
.12036
.01925
4.28641
4.99552
9.38354
8.02.44
3 44
8 06 31

16.68 59
5 36
16 53 23
90 2 36
104.35.58
+8.47
8950
9211
5739
1653
40,46

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

32nd Week.] THURSDAY, 7TH AUGUST, 1902. 56 day's at sea [219-145

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N 16° 37′ 35″ / Appt. Noon, 16 37 31 } Var. 1 Hour, 41·50″ | Equation of Time, decreasing, Sub. from Mean Time, 5m 41·31s. / Add to Appt. Time, 5 41·29 } Var. 1 Hour, 0·26s. | Sun's Semi-Diam., 15′ 48″ | Sidereal Time, 9h 0m 17s

This day begins and ends with light baffling airs and calms. The wind shifting from SSE. to North. The Barometer has risen very high for this latitude

Lat. by Obs., 41.09
Long. by Obs., 124.14
Course by Obs.,
,, by D. R.,
Distance by Obs., 25
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.42
Thermom., Air,
,, Sea,
Hygrometer,

14

32nd Week.] FRIDAY, 8TH AUGUST, 1902. 57 day's at sea [220-145

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N 16° 20′ 51″ / Appt. Noon, 16 20 47 } Var. 1 Hour, 42·16″ | Equation of Time, decreasing, Sub. from Mean Time, 5m 34·38s. / Add to Appt. Time, 5 34·36 } Var. 1 Hour, 0·30s. | Sun's Semi-Diam., 15′ 48″ | Sidereal Time, 9h 4m 14·02s

This day begins with light baffling airs Which finally backed to East and remained there during the remainder of the day giving us a Moderate Breeze. The Barometer is very high. I do not remember ever seeing it so high in the latitude at this season before it has risen one inch and one tenth in the past few days and we have been backing and filling with out much to our credit.

A large three masted ship has been in sight all day bound the same way. as ourselves

55

Lat. by Obs., 42°.80
Long. by Obs., 124°.0
Course by Obs.,
,, by D. R.,
Distance by Obs., 82
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.50
Thermom., Air,
,, Sea,
Hygrometer,

7.51. W. 17. Log. S 130° E head SSE. @ 8 am.

16. 23. 43. S. 28.
14 25 48 S. 48
3 33 6
16 23. 15 = S. 54
8 05 49 41. 07
4 7 36 106. 35
157 36
124.14 78 48
9 34
68.34

7. 58. 30
5 41
7 03 15

.1 2 2 9 9
.0 1 8 4 5
4.2 8 8 3 3
4.9 6 8 8 4
5.3 5 5 6 3

16. 24. 42. S. 38

16. 37. 31
5 36
16 31 55
50 2 35
106.34.30

+5:41

8950
3210
57.40
16 32
41.08
64
02
55

8. am W. 74 m Log S 135. E. @ 8 S. SSE

16. 25. 34. S. 37
16 27. 17. 9 54
3 33 6
16. 23. 44 = 10 00
8 7 41 42.06
8 16 03 104 18
138 24
124.07 79 12
10 00
69.12

.1 2 9 6 1
.0 1 7 8 2
4.2 7 2 7 3
4.5 7 0 7 3
5.3 5 0 8 5

8. 02. 08
5 33
8 7 41

16. 26. 24. #S. 46

42. 30. 124.00
1 47 38
44.17 123.22

16. 20. 47
5 36
16. 15. 11
90 2 35
106.17.46

+6:83

89 50
8 5
3 8 4 3
1 6 1 5
4 2. 3 0
4. 8
4. 22

8, 5, W. 99. Log,
14. 29. 13.9 35

14. 30. 05. 9 42
14 30 60. 9, 55.
8 33 6
14. 27. 17 10 01
8 14 01 44 17
8 11 16 104 07
160 15
122 49 80 09
12 10 01
122 37 70.68

.14515 .14515
.01041 .01041
4.23670 4.23307 23317
4.97312 4.97335
5.36228

8.14.35
3 24
8 16 01

Course
16. 27. 17 = 10. 01

122. 37. 44 37
124 06 42 36
123 2 07

60.7 127
S 26°E 138

44. 37. 122 37
1 39 43
44. 14 121. 54

16.03 44
6 44
15.58.00
50 2 54
16 0.0. 54

6, 26.82
2.90
5. 24. 12
1 18
5. 22 30

8930
2915
6033
1538
44.37

8. 50 W 28 Log.
17. 11. 44. 14. 54
17. 13. 30 15 16
3 33 4
17. 09. 57 15. 17
8 39 64 44 16
8. 10. 3 106 44
1 67 17
8 83 38
122 31 13 17
68.21

.16033
.01658
4.04490
4.56823
5.19004

8. 54. 85
5 19
8. 59. 64

17. 12. 38. 1502

15 44. 32
5 44
15 40 48
90 02 64
103. 43. 42

5. 16. 48

8900
2788
6212
1641
44.31
487
134
146
115

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

32nd Week.] SATURDAY, 9TH AUGUST, 1902. 58 days at Sea [221-144.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N16° 3′ 51″ / Appt. Noon, 16 3 47 } Var. 1 Hour, 42·81″ | Equation of Time, decreasing, Sub. from Mean Time, 5m 26·85s. / Add to Appt. Time, 5 26·82 } Var. 1 Hour, 0·326s. | Sun's Semi-Diam., 15′48″ | Sidereal Time, 9h 8m 10·57s.

This day begins with a moderate breeze from East. Middle part light unsteady breeze with frequent mist squalls.

I think the ships in sight is the "Kennebec" from Seattle bound to Boston with a load of Piles

Latter part of the day strong breeze from East passing clouds and some shot

We have gone to windward of the Ships in sight about 20 miles during the day

Lat. by Obs., 44° 37′
Long. by Obs., 122° 37′
Course by Obs., S 24 E
,, by D. R.,
Distance by Obs., 138
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30. 53
Thermom., Air,
,, Sea,
Hygrometer,

33rd Week.] SUNDAY, 10TH AUGUST, 1902 (11th Sunday after Trinity). 59 days at Sea [222-143.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N15° 46′ 36″ / Appt. Noon, 15 46 32 } Var. 1 Hour, 43·45″ | Equation of Time, decreasing, Sub from Mean Time, 5m 18·71s. / Add to Appt. Time, 5 18·68 } Var. 1 Hour, 0·351s. | Sun's Semi-Diam., 15′48″ | Sidereal Time, 9h 12m 7·13s.

This day begins with a fresh breeze from East.

Middle part wind unsteady with frequent mist squalls

Latter part light and puffy wind inclined to haul to the northward

Our companion is now hull down W N W of us. we first sighted him bearing East This is the first time since leaving Honolulu that we have had a chance to compare the Dirigo with any other ship and it makes me feel satisfied that the work done by the Dirigo was money well spent. all we want is a chance to get somewhere

Lat. by Obs., 46° 31
Long. by Obs., 122. 23
Course by Obs.,
,, by D. R.,
Distance by Obs., 111
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30. 50
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirige" from Honolulu to Philadelphia

33rd Week.] MONDAY, 11TH AUGUST, 1902. 60 days at Sea [223-142.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, | Mean Noon, N 15° 29′ 6″ / Appt. Noon, 15 29 2 | Var. 1 Hour, 44·07″ | Equation of Time, decreasing, Sub. from Mean Time, 5m 9·98s. Add to Appt. Time, 5 9·95 | Var. 1 Hour 0·376s. | Sun's Semi-Diam., 15′ 49″ | Sidereal Time, 9h 10m 3·68s.

Our East Wind is still with us. We have had it for a week and there is not any sign of a change yet.

Our Consumer has gone out of sight to leeward. It is a slight consolation to know that there is one ship that cannot get along any faster than we can.

East. Wind's end's this day I have been going South to find a wind in our favor We have not struck it yet.

The weather is quite cold and my Hawaiians are bundled up like a frozen Eskimo I would have made a lot of easting on the parallel of 42° on this act. but we have got this East wind and it has knocked all of my calculations in the head

Lat. by Obs., 48.09
Long. by Obs., 122.29
Course by Obs., South
" by D. R.,
Distance by Obs., 58
" by D. R.,
" by Log, 58
Current,
Var. used,
Dev. used,
Wind, Direct,
" Force,
Sea,
Weather,
Barom., 30.45
Thermom., Air,
" Sea,
Hygrometer,

33rd Week.] TUESDAY, 12TH AUGUST, 1902. 61 days at Sea [224-141.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, | Mean Noon, N 15° 11′ 20″ / Appt. Noon, 15 11 17 | Var. 1 Hour, 44·68″ | Equation of Time, decreasing, Sub. from Mean Time, 5m 0·67s. Add to Appt. Time, 5 0·63 | Var. 1 Hour, 0·400s. | Sun's Semi-Diam., 15′ 49″ | Sidereal Time, 9h 20m 0·24s.

The wind is East to E by North Have hung it will remain so it is an open question as there is not any sign of a change We will be South of 50° to day and it is quite cold our eyeballs have snow and hail instead of rain

Day Ends with the Wind East with no Sign of a Change Carried away the Jib stay

Lat by Obs., 49° 41
Long. by Obs., 121. 34
Course by Obs., S 12° E
" by D. R.,
Distance by Obs., 84
" by D. R.,
" by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
" Force,
Sea,
Weather,
Barom., 30.43
Thermom., Air,
" Sea,
Hygrometer,

30

8.41. W = 22 Log.

16.57. 41. 12° 26′
16.59. 43. 12. 37
3 33
16. 56. 10. 12. 44
8 46. 15 47. 57
8 09 33 105. 24
166 01
83 00
12 44
70. 16
8. 17322
.01595
4. 08588
4 97372
5. 24878
8. 40. 46
5 29
8446 15

S 146. E. SSE.

16 58 48. 12. 31

46.31
126
47.57

15. 29. 06
5 44
15. 23. 12
50 02 54
103. 26 06

5. 09. 85
86 50
26 18
60 8 32
3 23
48. 09
1 18
47. 51

44 31
44 04
1.38

146
39
185

S 148° E Pam SEfS Pearl

8. 54. W 21. Log

17. 12 25 13. 28
17 13. 05 13 36

17. 13. 57. 13. 41
17. 14 33. 13. 46
3.32
17 11 01 13 53
5 3 24 49 40
8 07 37 63 08
68 41
121. 43 44 20
9 13 53
121. 34 70. 27
1 88 64
01 53 3
4. 69 45 0
4. 57 42 1
5. 17 29 8
8. 58. 24
5 04
5 03 24

Lat Dep
21. 92

15. 11. 17
5 44
13 05 33
50 2 34
103 8. 27

+5. 11. 63
88 50
23 3
44 47
55. 41
5
1 32
52

8.29.55 Eq

N 49 00 10 23
+ 3 32 6
14.45.28 = 10.25
8 36 03 40.46
7 50 28 104.50
166.07
88.03
10.29
67.34
.12091
.01472
4.31609
4.96582
9.41754

8.60.63
4 56
7 33 03

8.33.55
4 56
8 38 45
8.44.W. 53

14.53.11
5-44
14 47 27
90 2 34
104.50 21

10.29
60.44
104.50
166.07
83.03
10.29
72.34
.19926
.01472
4.08280
4.97938
9.27636

8 26.33
4 56
8.31.23

12.23
8 29
3 54

121.11 15
120.26

4.50.74

89.57
24.06
65 45
14 47
50.38

14.45.28
4 38 43
8 04 43

8.44
4 49
3 55

121.84 49.41
121 82 50 38
32 1.14

Dist 77
24
S 17.E 81

N 28.E @ 8.16.
17.03.22. 12.53. 17.06.21.13.10
3 32 6
17.02.49 13 16
8 57 46 30 26
6 5 03 104 32
168.14
84.07
13.16
70.31
121.14

14.33.03 - 4.46
3 44
14 29 19
90 2 34
104 32 13

89.57
24 59
44 32
14 29
30.23

8.53.02
4 46
8.57.48

.19588
.01412
4.01074
4.97528
9.19602

Nautical Diary and Day's Work Book "Dirigo" from Honolulu to Philadelphia

33rd Week.] WEDNESDAY, 13TH AUGUST, 1902. 62 days @ Sea [225-140.]

AUT. EPHEMERIS, { Sun's Declination decreasing, } { Mean Noon, N14° 53' 21" / Appt. Noon 14 53 17 } Var. 1 Hour, 45·28" | Equation of Time, decreasing, Sub. from Mean Time 4m 50·77s. / Add to Appt. Time, 4 50·74 } Var. 1 Hour, 0·424s. | Sun's Semi-Diam., 15' 49" | Sidereal Time, 9h 23m 56·79s.

Throughout this day the wind has been baffling and hauling from ESE. to ENE., from a light to a strong breeze with frequent sleet squalls.

Lat. by Obs., 50°58
Long. by Obs., 121.26
Course by Obs., S 17°E
,, by D. R.,
Distance by Obs., 81
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air, 30.28
,, Sea,
Hygrometer,

33rd Week.] THURSDAY, 14TH AUGUST, 1902. 63 days at Sea [226-139.

AUT. EPHEMERIS, { Sun's Declination decreasing, } { Mean Noon, N14° 35' 7" / Appt. Noon, 14 35 3 } Var. 1 Hour, 45·86" | Equation of Time, decreasing, Sub. from Mean Time 4m 40·30s. / Add to Appt. Time, 4 40·27 } Var. 1 Hour, 0·448s. | Sun's Semi-Diam., 15' 49" | Sidereal Time, 9h 27m 53·34s.

This day begins with baffling easterly winds and mist squalls
At 4. Pm. wore ship to NNE.
Middle part mod. SE. thick fog and rain
heavy sea running from NE
The Barometer has fallen 4/10. during the day
Day Ended with unsteady Easterly winds. Mist squalls and Rough Sea

Lat. by Obs., 50.23
Long. by Obs., 121°10
Course by Obs.,
,, by D. R.,
Distance by Obs., 80
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29.75
Thermom., Air,
,, Sea,
Hygrometer,

59

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

33rd Week.] FRIDAY, 15TH AUGUST, 1902. 64 day's at Sea [227-138.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N14° 16′ 39″ / Appt. Noon, 14 16 35 } Var. 1 Hour, 46·44″ | Equation of Time, decreasing, Sub. from Mean Time, 4m 29·27s. / Add to Appt. Time, 4 29·24 } Var. 1 Hour, 0·471s. | Sun's Semi-Diam., 15′ 49″ | Sidereal Time, 9h 31m 49·90s.

Throughout this day Strong breeze and squally weather. Wind SE to South with a heavy easterly sea

49.53
Lat. by Obs., ~~49.45~~
Long. by Obs., 118.45
Course by Obs., N76E
,, by D. R.,
Distance by Obs., 111
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air, 29.36
,, Sea,
Hygrometer,

49h.

33rd Week.] SATURDAY, 16TH AUGUST, 1902. 65 day's at Sea [228-137.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N13° 57′ 58″ / Appt. Noon, 13 57 54 } Var. 1 Hour, 47·00″ | Equation of Time, decreasing, Sub. from Mean Time, 4m 17·70s. / Add to Appt. Time, 4 17·66 } Var. 1 Hour, 0·494s. | Sun's Semi-Diam., 15′ 49″ | Sidereal Time, 9h 35m 46·45s.

This day begins with a SE wind and squalls and a heavy Easterly Sea Middle part the fore night and hauled to West with just a light air at 10 am we were taken aback with the wind from SE and a fresh breeze We are getting it where the Chicken got the ax

Lat. by Obs., 49.23
Long. by Obs., 115.54
Course by Obs., N74°E
,, by D. R.,
Distance by Obs., 117
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29.53
Thermom., Air,
,, Sea,
Hygrometer,

51

8.32 W 8.34 W. 37.4 Log

14 49, 22. 12 41 = 14 57. 01. 12 52

16.53 12. 13.10
3.32 7
16.49.40 = 13 17
8 52 53 50.00
7 56 47 104 14
177 31
83 45
13 7
70 28

16.53. 22 - 13.18
3 32 6
16 50 50 13 24
8 53 00 50 10
7 55 50 104 14
167 48
83 54
13 24
70.30

105 45
13 12
118.57
12 7 10
2 13

.19344
.01354
4.02639
4.97436
5.20472

8.50 32
4 28
8 55 00
118 57
24
118.33

133

118
60
58

14.16.86
5 44
14.10.51
60 02 54
104.13.45

118.45 49.53
121 16 60 23
2 25 24
145
111.28

8.48 25
4 28
8.52.53

4.29
8957
2545
54.06
4.11
49.55

~74.8 116.

N45°E @ 7.35 Eg N 7.50 N 40.8
14
7.49

44. 5.21663

19193
.01354
4.03690
4.97426

5.04 W. 41 Log

16 45.40 14.26 = 16 44. 23. 14. 30
14 47
8 32 7
16.42.31 = 14 37
8 38 11 49.26
7.44.40 103 57
167 54
83 57
14 37
6 20

.18628
.01281
4.02283
4.97111
5.19303

114.45. 49.55
115.54 49 23
2 51 32
120
171

8.53.55
4.14
8.38.11

Dec Sun
148. 9. 32

112. 2. 32

~74°E 117.

13.57.57
5 44
13 52 07
60 2 54
103.55 01

+4.14
8957
2622
6329
1352
45.37

S 43. W. 93

S. 03. W 94.

16.25.34 - 13.07. 16. 43. 35. 15 18

3 32 4

14.22.02. 13 14 16

8 44 38 49.24

7 37 24 103 36

103 13 16 16 16

9 6 83.08

1 14.2 13 14

4 69.54

840.35

4 3

844.36 .18686 115.54

.01285 14 07

4.07758 1.47

4.57241

5.27920

840.53

13. 38. 00

5 54

13 32 06

90 2 40

103.35.46

4.03.52

4 30

4.01.26

1 90

4.03.16

89 67

27 06

62 57

13 83

49.24

N 49. @ 912

14.13.38. 13.12

3 31 4

14. 10. 07 13 18

8 38 03 48 80

7 32 01 103 17

165 05

92 32

13 18

65 14

.17874

.01178

4.11377

4.57083

5.27512

8. 34. 12

3 31

8 38 03

8. 42. W. 7th Day

~~14. 15. 01~~ ~~13.20~~

16. 15. 02 13 20

13. 19. 52

3 54

13 13 38

90 2 40

103.16 38

+3.57

89 60

24 16

61.33

13 14

48.21

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

34th Week.] SUNDAY, 17TH AUGUST, 1902. (12th Sunday after Trinity). 46 day's at Sea [230-136.

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N13° 39' 3" / Appt. Noon 13 39 0 } Var. 1 Hour, 47·55" | Equation of Time, decreasing, Sub. from Mean Time 4m 5·59s. / Add to Appt. Time, 4 5·55 } Var. 1 Hour, 0·516s. | Sun's Semi-Diam., 15' 50" | Sidereal Time, 9h 39m 43·01s.

The first and middle part of this day Easterly Wind's then calm in which the Ship did some tale rolling with the heavy Sea that is running from the southward Latter part breeze came from West and pushed us along three miles per hour for the remainder of the day fine pleasant weather

Lat. by Obs., 49 24
Long. by Obs., 114° 4
Course by Obs.,
,, by D. R.,
Distance by Obs., 70.
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29-57
Thermom., Air,
,, Sea,
Hygrometer,

1.

34th Week.] MONDAY, 18TH AUGUST, 1902. 47 day's at Sea [230-135.

NAUT. EPHEMERIS, { Sun's Declination decreasing, } { Mean Noon, N13° 19' 55" / Appt. Noon, 13 19 52 } Var. 1 Hour, 48·08" | Equation of Time, decreasing, Sub. from Mean Time, 3m 52·96s. / Add to Appt. Time, 3 52·92 } Var. 1 Hour, 0·537s. | Sun's Semi-Diam., 15'50" | Sidereal Time, 9h 43m 39·56s.

This day begins with a light westerly wind and pleasant weather

8 PM we were taken aback with the wind from East and during the middle part of the day we had a strong breeze with torrents of rain and squalls Toward the latter part it moderated and the wind Baukes S.E. so ends the day I do not know what to make of this kind of weather I have been down here as often as most any man in the business and I have never seen any thing like it

We have not done any thing for two weeks with half a chance we could have been up with Cape Horn to day

Lat. by Obs., 48° 21
Long. by Obs., 112.53
Course by Obs.,
,, by D. R.,
Distance by Obs., 81
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30 10
Thermom., Air,
,, Sea,
Hygrometer,

82

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

34th Week.] TUESDAY, 19TH AUGUST, 1902. 68 day's at Sea [231-134.]

NAUT. EPHEMERIS, { Sun's Declination, *decreasing*, } { Mean Noon, N13° 0′ 35″ / Appt. Noon, 13 0 32 } Var. 1 Hour, 48·60″ | Equation of Time, *decreasing*, Sub. from Mean Time, 3m 39·81s. / Add to Appt. Time, 3 39·78 } Var. 1 Hour, 0·558s. | Sun's Semi-Diam., 15′ 50″ | Sidereal Time, 9h 47m 36·11s.

This day begin with a moderate S.E. Wind. which increases to a strong breeze

Middle and latter part blowing a fresh gale from S.E. with squalls of wind and rain, and a heavy Easterly sea

Lat. by Obs., 46 24
Long. by Obs., 110 37
Course by Obs.,
,, by D. R.,
Distance by Obs., 131
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29 80
Thermom., Air,
,, Sea,
Hygrometer,

13

34th Week.] WEDNESDAY, 20TH AUGUST, 1902. 69 days at Sea [232-133.]

NAUT. EPHEMERIS, { Sun's Declination, *decreasing*, } { Mean Noon, N12° 41′ 2″ / Appt. Noon, 12 40 59 } Var. 1 Hour, 49·11″ | Equation of Time, *decreasing*, Sub. from Mean Time, 3m 26·17s. / Add to Appt. Time, 3 26·14 } Var. 1 Hour, 0·578s. | Sun's Semi-Diam., 15′ 5″ | Sidereal Time, 9h 51m 32·67s.

This day begins with a fresh S.S.E. gale and high sea

Middle part more Moderate and wind Veering more Easterly

Latter part. Wind E.S.E @ 10. am wore Ship to South

day ends with moderate breeze and fair weather

Lat. by Obs., 46. 10
Long. by Obs., 109. 00
Course by Obs.,
,, by D. R.,
Distance by Obs., 90
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30-38
Thermom., Air,
,, Sea,
Hygrometer,

23

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

34th Week.] THURSDAY, 21ST AUGUST, 1902. 70 day's at Sea [233-132.]

NAUT. EPHEMERIS, { Sun's Declination, *decreasing*, } { Mean Noon, N12° 21′ 17″ / Appt. Noon, 12 21 14 } Var. 1 Hour, 49·61″ | Equation of Time, *decreasing*, Sub. from Mean Time, 3m 12·05s. / Add to Appt. Time, 3 12·02 } Var. 1 Hour, 0·598s. | Sun's Semi-Diam., 15′ 50″ | Sidereal Time, 9h 55m 29·22s.

Throughout this day we have been favored with Moderate breezes from E.S.E. to E.N.E. With frequent mist squall's

The Easterly sea is dropping and we may have a change in our favor — Some day.

Lat. by Obs., 47° 37
Long. by Obs., 108° 36
Course by Obs., S 11° E
,, by D. R.,
Distance by Obs., 175
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30. 43
Thermom., Air,
,, Sea,
Hygrometer,

100

34th Week.] FRIDAY, 22ND AUGUST, 1902. 71 days at Sea [234-131.]

NAUT. EPHEMERIS, { Sun's Declination, *decreasing*, } { Mean Noon, N12° 1′ 20″ / Appt. Noon, 12 1 18 } Var. 1 Hour, 50·10″ | Equation of Time, *decreasing*, Sub. from Mean Time, 2m 57·47s. / Add to Appt. Time, 2 57·44 } Var. 1 Hour, 0·617s. | Sun's Semi-Diam., 15′ 51″ | Sidereal Time, 9h 59m 25·77s.

This day begins a moderate E.N.E breeze and pleasant — weather

Middle part Mist Squalls

Latter part Strong breeze and squally, Wind veering more to Northward

Lat. by Obs., 45 09
Long. by Obs., 107. 19
Course by Obs., S E E
,, by D. R.,
Distance by Obs., 108-
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.-25
Thermom., Air,
,, Sea,
Hygrometer,

100

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

34th Week.] SATURDAY, 23RD AUGUST, 1902. 72 day's at Sea [235-130.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N 11° 41'12" / Appt. Noon, 11 41 10 } Var. 1 Hour, 50·57" | Equation of Time, decreasing, { Sub. from Mean Time, 2m 42·45s. / Add to Appt. Time, 2 42·42 } Var. 1 Hour, 0·635s. | Sun's Semi-Diam., 15' 51" | Sidereal Time, 10h 3m 22·33s.

Strong headwinds this day Wind E by N
Strong Gale and high Sea.
heavy rain Squalls

Ship taking large quantities of Water on board

Lat. by Obs., 50.°00
Long. by Obs., 107.°47
Course by Obs., S 11° E
,, by D. R.,
Distance by Obs., 72
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29.45
Thermom., Air,
,, Sea,
Hygrometer,

72 Dey

35th Week.] SUNDAY, 24TH AUGUST, 1902. (13th Sunday after Trinity). 73 days [236-129.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N 11° 20' 52" / Appt. Noon, 11 20 50 } Var. 1 Hour, 51·03" | Equation of Time, decreasing, { Sub. from Mean Time, 2m 26·39s. / Add to Appt. Time, 2 26·96 } Var. 1 Hour, 0·653s. | Sun's Semi-Diam., 15' 51" | Sidereal Time, 10h 7m 18·88s.

This day comes in with a Strong Gale
from E by N. with high Sea Decks full fore
and aft the greate part of the time
During the middle part the wind Veared
to N by W strong gale with constant rain
At daylight the Easterly Sea having decreased
I kept the ship off to East and run under
reefed Upsails high confused Sea taking lots
of water on deck.
day end with strong gale from NNE
inter east and variable

D.R.
Lat. by Obs., 50. 36
Long. by Obs., 104 42
Course by Obs., S 66° E
,, by D. R.,
Distance by Obs., 84
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29.55
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

35th Week.] MONDAY, 25TH AUGUST, 1902. 74 day's at Sea [237-128.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N 11° 0' 22" / Appt. Noon, 11 0 20 } Var. 1 Hour, 51·48" | Equation of Time, decreasing, { Sub. from Mean Time, 2m 11·12s. / Add to Appt. Time, 2 11·10 } Var. 1 Hour 0·676s. | Sun's Semi-Diam., 15' 51" | Sidereal Time, 10h 11m 15·43s.

The day begins with a Strong Gale
from NW. with thick rainy weather
During the middle part the wind hauled
west and moderated to almost Calm and
fog. At daylight we had a light air
from SW. Clear weather.

Latter part of this day light breeze from
South with fog

Lat. by Obs., 52.°47
Long. by Obs., 107 43
Course by Obs., S 57° E
,, by D. R.,
Distance by Obs., 178
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29 82
Thermom., Air,
,, Sea,
Hygrometer,

9.

35th Week.] TUESDAY, 26TH AUGUST, 1902. 75 days at Sea [238-127.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N 10° 39' 41" / Appt. Noon, 10 39 39 } Var. 1 Hour, 51·91" | Equation of Time, decreasing, { Sub. from Mean Time, 1m 54·85s. / Add to Appt. Time, 1 54·83 } Var. 1 Hour, 0·680s. | Sun's Semi-Diam., 15' 51" | Sidereal Time, 10h 15m 11·98s.

This day begins with a light breeze
from South with thick fog. at 4 PM. Wind
SE. to ESE. fresh breeze with mist & squalls
and remained from that quarter during
the remainder of the day. With the exception
of a few hours at a time we have had the
wind from the Eastward all of this month
and the distinct trend of weather
fog rain and sleet.
If we are not up against
it this voyage I never knew a ship that
was.

S 104 W E½ N 17° Error 9° W Dec

Lat. by Obs., 50.58
Long. by Obs., 99° 32'
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log, 120
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29 82
Thermom., Air,
,, Sea,
Hygrometer,

87

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

35th Week.] WEDNESDAY, 27TH AUGUST, 1902. 76 days at Sea [239-126.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N 10° 18'50" / Appt. Noon, 10 18 49 } Var. 1 Hour, 52·33" | Equation of Time, decreasing, Sub. from Mean Time, 1m 38·20s. / Add to Appt. Time, 1 38·18 } Var. 1 Hour, 0·701s. | Sun's Semi-Diam., 15′ 52″ | Sidereal Time, 10h 19m 8·54s.

This day begins with a moderate breeze from SE. Which chanced to squall before dark, giving us a moderate breeze throughout the night with frequent mist squalls.

Latter part of the day light breeze Hazy weather. Smooth Sea

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.10
Thermom., Air,
,, Sea,
Hygrometer,

4

35th Week.] THURSDAY, 28TH AUGUST, 1902. 77 days at Sea [240-125.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N 9° 57′ 49″ / Appt. Noon, 9 57 48 } Var. 1 Hour, 52·73" | Equation of Time, decreasing, Sub. from Mean Time, 1m 21·18s. / Add to Appt. Time, 1 21·16 } Var. 1 Hour, 0·716s. | Sun's Semi-Diam., 15′ 52″ | Sidereal Time, 10h 23m 5·09s.

First and middle part of this day Light breeze Varying from SSE to West

Latter part wind chanced again to South and gave us a fresh breeze with clear pleasant weather

Lat. by Obs., 57 18
Long. by Obs., 93 04
Course by Obs., S 75 E
,, by D. R.,
Distance by Obs.,
,, by D. R., 127
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30-30
Thermom., Air,
,, Sea,
Hygrometer,

20 Day

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

Week.] FRIDAY, 29TH AUGUST, 1902. 78 day's at Sea [241-124.]

EPHEMERIS, { Sun's Declination, decreasing } { Mean Noon, N 9° 36′ 38″ / Appt. Noon, 9 36 37 } Var. 1 Hour, 53·13" | Equation of Time, decreasing, Sub. from Mean Time, 1m 3·80s. / Add to Appt. Time, 1 3·79 } Var. 1 Hour, 0·731s. | Sun's Semi-Diam., 15′ 52″ | Sidereal Time, 10h 27m 1·64s.

This day comes in with a fresh breeze from South

Middle part the wind chanced WSW and fell light fair pleasant weather

Latter part. Moderate breeze with a heavy S W. Swell. The wind is unsteady in both force and direction the ship will be going 8 miles per hour for a while and then drop down to three miles per hour. Since leaving the S.E. trades we have had 90 per. cent Easterly winds

Lat. by Obs., 54. 49
Long. by Obs., 86.41
Course by Obs., S 47. E
,, by D. R.,
Distance by Obs., 167
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30-50
Thermom., Air,
,, Sea,
Hygrometer,

70.

Week.] SATURDAY, 30TH AUGUST, 1902. 79 Days at Sea [242-123.]

EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N 9° 15′18″ / Appt. Noon 9 15 18 } Var. 1 Hour, 53·51" | Equation of Time, decreasing Sub. from Mean Time, 0m 46·08s. / Add to Appt. Time, 0 46·07 } Var. 1 Hour, 0·745s. | Sun's Semi-Diam., 15′ 52″ | Sidereal Time, 10h 30m 58·20s.

This day begins with a moderate breeze from WSW. with a heavy SW. Swell Middle part strong breeze

Latter part fresh gale heavy sea from S W.

53.38
Lat. by Obs., 53 38
Long. by Obs., 44 03
Course by Obs., S 57 E
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log, 200
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.10
Thermom., Air,
,, Sea,
Hygrometer,

84 Day

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

36th Week.] SUNDAY, 31ST AUGUST, 1902. (14th Sunday after Trinity). 80 Days at Sea [243-122.]

NAUT. EPHEMERIS, { Sun's Declination, *decreasing*, } { Mean Noon, N 8° 53′ 49″ / Appt. Noon, 8 53 49 } Var. 1 Hour, 53·87″ | Equation of Time, *decreasing*, Sub. from Mean Time, 0m 28·04s. / Add to Appt. Time, 0 28·03 } Var. 1 Hour, 0·758s. | Sun's Semi-Diam., 15′ 52″ | Sidereal Time, 10h 34m 54·75s.

This day comes in with a fresh gale from WSW. which moderates towards night to first an fresh, and this light breeze

We have had a heavy sea running from S & W. causing the ship to roll and take large quantities of water on board

Lat. by Obs., 5443
Long. by Obs., 60.16
Course by Obs., S65°W
,, by D. R.,
Distance by Obs., 152
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.05
Thermom., Air,
,, Sea,
Hygrometer,

33

36th Week.] MONDAY, 1ST SEPTEMBER, 1902. 81 days at Sea [244-121.]

NAUT. EPHEMERIS, { Sun's Declination, *decreasing*, } { Mean Noon, N 8° 32′ 12″ / Appt. Noon, 8 32 12 } Var. 1 Hour, 54·22″ | Equation of Time, *decreasing*, Sub. from Mean Time, 0m 9·68s. / Add to Appt. Time, 0 9·67 } Var. 1 Hour 0·771s. | Sun's Semi-Diam., 15′ 53″ | Sidereal Time, 10h 38m 51·30s.

Throughout this day moderate breezes from SW. to West Weather foggy at times Latter part smooth Sea.

Lat. by Obs., 56.17
Long. by Obs., 7623
Course by Obs., S53E
,, by D. R.,
Distance by Obs., 164
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29.92
Thermom., Air,
,, Sea,
Hygrometer,

84

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

Week.] TUESDAY, 2ND SEPTEMBER, 1902. 82 Days at Sea [245-120.]

EPHEMERIS, { Sun's Declination, *decreasing* } { Mean Noon, N 8° 10′ 26″ / Appt. Noon, 8 10 27 } Var. 1 Hour, 54·55″ | Equation of Time, *increasing*, Add to Mean Time, 0m 9·00s. / Sub. from Appt. Time, 0 8·99 } Var. 1 Hour, 0·784s. | Sun's Semi-Diam., 15′ 53″ | Sidereal Time, 10h 42m 47·85s.

This day begins with unsteady breezes and fine skies to West & West to South Middle part almost calm at times Latter part strong breeze from SW with snow squalls

Lat. by Obs., 54 48
Long. by Obs., 71 24
Course by Obs., S 79° E
,, by D. R.,
Distance by Obs., 164
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29.88
Thermom., Air,
,, Sea,
Hygrometer,

43.

Week.] WEDNESDAY, 3RD SEPTEMBER, 1902. 83 Days at Sea [246-119.]

EPHEMERIS, { Sun's Declination, *decreasing*, } { Mean Noon, N 7° 48′ 33″ / Appt. Noon 7 48 33 } Var. 1 Hour, 54·88″ | Equation of Time, *increasing* Add to Mean Time, 0m 27·96s. / Sub. from Appt. Time, 0 27·95 } Var. 1 Hour, 0·796s. | Sun's Semi-Diam., 15′ 53″ | Sidereal Time, 10h 46m 44·41s.

First part of the day strong breeze from SW. 8 P.m. Wind chanced to SSE and all light middle part just steerage way on the Ship Latter part light baffling airs At daylight sighted Diego Ramirez bearing NE 90. miles at noon it was bearing NE¼E 80. miles day ends with light unsteady winds from NW to SW. smooth Sea and pleasant weather

Lat. by Obs., 56.40
Long. by Obs., 69.18
Course by Obs.,
,, by D. R.,
Distance by Obs., 71
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

87.

Nautical Diary and Day's Work Book, "Diriga" from Honduras to Philadelphia

36th Week.] THURSDAY, 4TH SEPTEMBER, 1902. 84 days at Sea [247-118.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N7° 26′ 32″ / Appt. Noon, 7 26 32 } Var. 1 Hour, 55·18″ | Equation of Time, increasing, Add to Mean Time, 0m 47·20s. / Sub. from Appt. Time, 0 47·19 } Var. 1 Hour, 0·807s. | Sun's Semi-Diam., 15′ 53″ | Sidereal Time, 10h 50m 40·96s.

First part light an steady breeze
6. Am Diriga bore N. true

Midle part the Same
at daylight sighted Cap Horn

Latter part fresh breeze from North
saw two Ships standing to the South-
and westward

Lat. by Obs., 56°11
Long. by Obs., 65.09
Course by Obs., N78°
,, by D. R.,
Distance by Obs., 138
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air, 28.70
,, Sea,
Hygrometer,

22

36th Week.] FRIDAY, 5TH SEPTEMBER, 1902. [248-117.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N 7° 4′ 24″ / Appt. Noon, 7 4 25 } Var. 1 Hour, 55·47″ | Equation of Time, increasing, Add to Mean Time, 1m 6·71s. / Sub. from Appt. Time, 1 6·69 } Var. 1 Hour, 0·818s. | Sun's Semi-Diam., 15′ 54″ | Sidereal Time, 10h 54m 37·51s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

24

l Diary and Day's Work Book, from to

8
12
12
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43

ek.] SATURDAY, 6TH SEPTEMBER, 1902. [249-116.]

EMERIS, { Sun's Declination, decreasing, } { Mean Noon, N6° 42′ 8″ / Appt. Noon, 6 42 10 } Var. 1 Hour, 55·75″ | Equation of Time, increasing, Add to Mean Time, 1m 26·47s. / Sub. from Appt. Time, 1 26·45 } Var. 1 Hour, 0·828s. | Sun's Semi-Diam., 15′ 54″ | Sidereal Time, 10h 58m 34·06s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

th Week.] SUNDAY, 7TH SEPTEMBER, 1902 *(15th Sunday after Trinity).* [250-115.]

T. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N6° 19′ 47″ / Appt. Noon, 6 19 48 } Var. 1 Hour, 56·02″ | Equation of Time, increasing, Add to Mean Time, 1m 46·46s. / Sub from Appt. Time, 1 46·44 } Var. 1 Hour, 0·837s. | Sun's Semi-Diam., 15′ 54″ | Sidereal Time, 11h 2m 30·62s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, ... from ..... to .....

37th Week.] WEDNESDAY, 10TH SEPTEMBER, 1902. [253-112.]

NAUT. EPHEMERIS, { Sun's Declination, *decreasing*, { Mean Noon, N 5° 12′ 6″ / Appt. Noon, 5 12 8 } Var. 1 Hour, 56·73″ | Equation of Time, *increasing*, Add to Mean Time, 2m 47·69s. / Sub. from Appt. Time, 2 47·64 } Var. 1 Hour, 0·861s. | Sun's Semi-Diam., 15′55″ | Sidereal Time, 11h 14m 20·27s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

37th Week.] THURSDAY, 11TH SEPTEMBER, 1902 [254-111.]

NAUT. EPHEMERIS, { Sun's Declination, *decreasing*, { Mean Noon, N4′ 49′ 21″ / Appt. Noon, 4 49 24 } Var. 1 Hour, 56·94″ | Equation of Time, *increasing*, Add to Mean Time, 3m 8·45s. / Sub from Appt. Time, 3 8·40 } Var. 1 Hour, 0·868s. | Sun's Semi-Diam., 15′55″ | Sidereal Time, 11h 18m 16·82s.

Lat. by Obs., 46.00 47.03
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

46.00 47.05
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45.03 45.57

Nautical Diary and Day's Work Book, from to

37th Week.] FRIDAY, 12TH SEPTEMBER, 1902. [255-110

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N 4° 26′ 32″ / Appt. Noon, 4 26 35 } Var. 1 Hour, 57·14″ | Equation of Time, increasing, Add to Mean Time, 3m 29·35s. / Sub. from Appt. Time, 5 29·30 } Var. 1 Hour, 0·873s. | Sun's Semi-Diam., 15′ 55″ | Sidereal Time, 11h 22m 13·

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

86

37th Week.] SATURDAY, 13TH SEPTEMBER, 1902. [256-109.]

NAUT. EPHEMERIS, { Sun's Declination, decreasing, } { Mean Noon, N4° 3′ 33″ / Appt. Noon, 4 3 42 } Var. 1 Hour, 57·32″ | Equation of Time, increasing, Add to Mean Time, 3m 50·33s. / Sub. from Appt. Time, 3 50·32 } Var. 1 Hour, 0·878s. | Sun's Semi-Diam., 15′ 56″ | Sidereal Time, 11h 26m 9·93s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

84

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1, 21 1 31

5-9. 81

4. 26, 35
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4, 23, 35
PO. 3 5-4
84, 2729

3. 28, 30
2. 14
3, 01. 48
-3 28
89 49
41 51
47 58
4 24
43, 34
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43, 14

43, 80 8. 45. W

11. 96, 54. 25, 08
11. 38. 52 - 25, = 25;
3 39 8
11. 35. 13. 25, 34
8 97 49 42, 10
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80 54
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4, 18909
4, 91512
5, 24538

8, 41, 17
3 4
8, 38 13

11. 37, 49. 25, 15
3 39 8
11. 34. 10. 2524
8 38 13 42, 10
2, 55, 57 94, 05
16 1 39
80 49
25, 24
33, 25

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4, 20302
4, 91552
9, 24973

4, 03, 42
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4, 00, 42
90, 3 54
94. 04 46

3. 50, 32
2, 18
3, 52, 50
3, 00
-3, 49 50

89 49
43 45
46 04
4 01
42 03

Nautical Diary and Day's Work Book, from to

38th Week.] TUESDAY, 16TH SEPTEMBER, 1902. [259-106.]

NAUT. EPHEMERIS, { Sun's Declination, *decreasing*, } { Mean Noon, N 2° 54′ 32″ / Appt. Noon, 2 54 37 } Var. 1 Hour, 57·79″ | Equation of Time, *increasing*, Add to Mean Time, 4m 54·00s / Sub. from Appt. Time, 4 53·93 } Var. 1 Hour, 0·887s. | Sun's Semi-Diam., 15′ 56″ | Sidereal Time, 11h 37m 59·58s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

38th Week.] WEDNESDAY, 17TH SEPTEMBER, 1902. [260-105.]

NAUT. EPHEMERIS, { Sun's Declination, *decreasing*, } { Mean Noon, N 2° 31′ 23″ / Appt. Noon, 2 31 28 } Var. 1 Hour, 57·92″ | Equation of Time, *increasing*, Add to Mean Time, 5m 15·31s. / Sub. from Appt. Time, 5 15·23 } Var. 1 Hour, 0·888s. | Sun's Semi-Diam., 15′ 57″ | Sidereal Time, 11h 41m 56·14s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

N 110.2.8,10. am

8,02

10.55.32.20.13 = 3.39 = 8

10.51.53 = 20 21
8.56.24 = 40 51
2 55 29 = 82 56

80 13
13 7
43.22
19
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8.07.14
432
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154 04
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2,54.37
2 48
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89.49
44 20
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11.16.25.27.13

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11-16-43 = 27-42
8 30 = 8850
44 57 = 2208
15841
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11.17.27.27.23

2,08,18
244
2524
50 3 34
92,09,22

89 48
49 07
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2 3
38,34
14
30

Nautical Diary and Day's Work Book, from to

38th Week.] THURSDAY, 18TH SEPTEMBER, 1902. [261-104.]

NAUT. EPHEMERIS, { Sun's Declination, *decreasing*, { Mean Noon, N2° 8′ 11″ / Appt. Noon 2 8 16 } Var. 1 Hour, 58·04″ | Equation of Time, *increasing*, Add to Mean Time 5m 36·63s. / Sub. from Appt. Time, 5 36·55 } Var. 1 Hour, 0·888s. | Sun's Semi-Diam., 15′ 57″ | Sidereal Time, 11h 45m 52·69s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, **Force,**
Sea,
Weather,
Barom.,
Thermom., Air,
,, **Sea,**
Hygrometer,

78

38th Week.] FRIDAY, 19TH SEPTEMBER, 1902. [262-103.

NAUT. EPHEMERIS, { Sun's Declination *decreasing*, { Mean Noon, N 1 44′ 56″ / Appt. Noon, 1 45 2 } Var. 1 Hour, 58·15″ | Equation of Time, *increasing*, Add to Mean Time, 5m 57·94s. / Sub. from Appt. Time, 5 57·85 } Var. 1 Hour, 0·887s. | Sun's Semi-Diam., 15′57″ | Sidereal Time, 11h 49m 49·24s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, **Force,**
Sea,
Weather,
Barom.,
Thermom., Air,
,, **Sea,**
Hygrometer,

Nautical Diary and Day's Work Book, ... **from** ..... **to** .....

38th Week.] SATURDAY, 20TH SEPTEMBER, 1902. [263-102.]

NAUT. EPHEMERIS,	Sun's Declination, *decreasing*,	Mean Noon, N 1° 21′ 39″ Appt. Noon, 1 21 45	Var. 1 Hour, 58·24″	Equation of Time, *increasing*, Add to Mean Time, 6m 19·21s. Sub. from Appt. Time, 6 19·12	Var. 1 Hour, 0·885s.	Sun's Semi-Diam., 15′ 57″	Sidereal Time, 11h 53m 45·79s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

39th Week.] SUNDAY, 21ST SEPTEMBER, 1902. *(17th Sunday after Trinity).* [264-101.]

NAUT. EPHEMERIS,	Sun's Declination, *decreasing*,	Mean Noon, N 0° 58′ 20″ Appt. Noon, 0 58 26	Var. 1 Hour, 58·32″	Equation of Time, *increasing*. Add to Mean Time, 6m 40·42s. Sub. from Appt. Time, 6 40·33	Var. 1 Hour, 0·882s.	Sun's Semi-Diam., 15′ 58″	Sidereal Time, 11h 57m 42·34s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

1, 21 45
2 44
1 18 57

89 48
32 02
57 46
1 18
56. 30

Log 10 7.50 W
10, 13, 49 . 25.31 . 10.12.52.26-21
3 38 9
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2.13.42 90.14
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90.13.38

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2 13
-7 22.01

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31.44 31.03

Nautical Diary and Day's Work Book, from to

39th Week.] MONDAY, 22ND SEPTEMBER, 1902. [265-100.]

NAUT. EPHEMERIS,	Sun's Declination, *decreasing*,	Mean Noon, N 0° 34′ 59″ / Appt. Noon, 0 35 6	Var. 1 Hour, 58·38″	Equation of Time, *increasing*. Add to Mean Time, 7m 1·55s. / Sub. from Appt. Time, 7 1·45	Var. 1 Hour 0·878s.	Sun's Semi-Diam., 15′ 58″	Sidereal Time, 12h 1m 38·90s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

39th Week.] TUESDAY, 23RD SEPTEMBER, 1902. [266-99.]

NAUT. EPHEMERIS,	Sun's Declination, *decreasing*,	Mean Noon, N0° 11′ 37″ / Appt. Noon, 0 11 44	Var. 1 Hour, 58·43″	Equation of Time, *increasing*, Add to Mean Time, 7m 32·57s. / Sub. from Appt. Time, 7 22·46	Var. 1 Hour, 0·873s.	Sun's Semi-Diam., 15′ 58″	Sidereal Time, 12h 5m 35·45s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, ... **from** ..... **to** .....

39th Week.] WEDNESDAY, 24TH SEPTEMBER, 1902. [267-98.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, { Mean Noon, S 0° 11′47″ / Appt. Noon, 0 11 39 } Var. 1 Hour, 58·47″ | Equation of Time, *increasing*, Add to Mean Time, 7 m 43·46s. / Sub. from Appt. Time, 7 43·35 } Var. 1 Hour, 0·867s. | Sun's Semi-Diam., 15′ 5″ | Sidereal Time, 12h 9m 32·90s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

39th Week.] THURSDAY, 25TH SEPTEMBER, 1902. [268-97.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, { Mean Noon, S 0° 35′ 11″ / Appt. Noon, 0 35 3 } Var. 1 Hour, 58·49′ | Equation of Time, *increasing*, Add to Mean Time, 8m 4·19s. / Sub. from Appt. Time, 8 4·08 } Var. 1 Hour, 0·860s. | Sun's Semi-Diam., 15′ 59″ | Sidereal Time, 12h 13m 28·55s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

8.07 W. 16. Log

10.03.05. 27.55. 10.03.49 .. 28.04
10.04.39 .. 28.14
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10.01.00 28.23
8 00 24 28 34
2 00 36 89 03
30.08 146.00
8 7300
30.01 2823
44.37

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.00006
4.44594
4.84456
9.34894
6.08.08
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28.22. 30.07
1 27 46
24.55 29.21
37
26.18

64
22
106

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2 00
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3 34
00 56 33
60 00.00
89.03.27

8.24.64
1 42
8.16.06
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12
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62
23
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7 20 07 24.33
1 57 29 88.40
135 52
47 36
15 15 20.17
14 7 47 38
29.22

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.00012
4.57482
4.84832
9.49306

7.28.44
8.43
7 20 01

1.21.47
2 00
1.23.51
3 34
1 18 57
60 00 00
88.40 63

8.45.07
1 42
8.44.43
3 34
6.42.49

Nautical Diary and Day's Work Book, "Dirigo" **from** Honolulu **to** Philadelphia

39th Week.] FRIDAY, 26TH SEPTEMBER, 1902. [269-96.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, } { Mean Noon, S 0° 58′ 35″ / Appt. Noon, 0 58 27 } Var. 1 Hour, 58·50″ | Equation of Time, *increasing*, Add to Mean Time, 8m 24·76s. / Sub. from Appt. Time, 8 24·64 } Var. 1 Hour 0·853s. | Sun's Semi-Diam., 15′ 59″ | Sidereal Time, 12h 17m 25·10s.

Throughout the day light Southerly breeze Pleasant weather

When the mist is fair there is not any of it. when it gets ahead we get more than we want

30

Lat. by Obs., 28.22
Long. by Obs., 30 07
Course by Obs., N 53° E
,, by D. R.,
Distance by Obs., 98
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

39th Week.] SATURDAY, 27TH SEPTEMBER, 1902. [270-95.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, } { Mean Noon, S1° 21′ 59″ / Appt. Noon, 1 21 51 } Var. 1 Hour, 58·50″ | Equation of Time, *increasing*, Add to Mean Time, 5m 45·14s. / Sub. from Appt. Time, 8 45·01 } Var. 1 Hour, 0·844s. | Sun's Semi-Diam., 15′ 59″ | Sidereal Time, 12h 21m 21·65s.

DR

This day begins with a light breeze from South Middle part winds hauled to S.E. army a little. Latter part wind E.S.E. fresh breeze with mist squalls The ship has been sailing Eight miles per hour the first time she has done it for a months.

Lat. by Obs., 26 18
Long. by Obs., 29 22
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log, 132
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30-15
Thermom., Air,
,, Sea,
Hygrometer,

62 Log

Nautical Diary and Day's Work Book, "Dinigo" from Honolulu to Philadelphia

40th Week.] SUNDAY, 28TH SEPTEMBER, 1902. *(18th Sunday after Trinity).* [271-94.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing,* | { Mean Noon, S 1° 45′23″ / Appt. Noon, 1 45 15 } | Var. 1 Hour, 58·48″ | Equation of Time, *increasing,* Add to Mean Time, 9m 5·30s. / Sub. from Appt. Time, 9 5·17 | Var. 1 Hour, 0·835s. | Sun's Semi-Diam., 15′ 59″ | Sidereal Time, 12h 25m 18·21s.

The first few hours of this day we had a fine breeze from SE. Then it fell light and began to rain Middle part Calms Latter part wind North with rain Squalls.

4. Am. tacked Ship to E by E. Wind very unsteady

Lat. by Obs., 25. 15
Long. by Obs., 29. 15
Course by Obs.,
,, by D. R.,
Distance by Obs., 63
,, by D. R..
,, by Log, 80
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.16
Thermom., Air,
,, Sea,
Hygrometer,

40th Week.] MONDAY, 29TH SEPTEMBER, 1902. *(St. Michael—Michaelmas Day.* [272-93.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing,* | { Mean Noon, S2° 8′ 47″ / Appt. Noon, 2 8 38 } | Var. 1 Hour, 58·41″ | Equation of Time, *increasing,* Add to Mean Time, 9m 25·24s. / Sub. from Appt. Time, 9 25·11 | Var. 1 Hour, 0·826s. | Sun's Semi-Diam., 16′ 0″ | Sidereal Time, 12h 29m 14·76s.

Throughout this day we have had light baffling Northerly airs and we have not made a mile to the Northwards

Lat. by Obs., 25.15
Long. by Obs., 28.14
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.16
Thermom., Air,
,, Sea,
Hygrometer,

1, 45, 15
2
1 47 15

8 9 48
6 6 20
2 0 28
1 47
23. 13

7. 33. W

S. 21. 29. 21. 56; S. 22. 16. 2. 2. 08 — 2,08.38
S 2 00
2,10.38
4 32
2 05 56
9000.00
87.54.04

S. 23 21 = 22. 18
3,38
S. 19. 43. 22 27
7 26
1 53 43
13 13
13 11
28.24
12
28 14

S. 11. 43. 22. 27
23 17
47 54
135 38
67 49
22 27
45 22
,0 43 73
,0 0 6 29
4,5 7 7 00
4.85 225
S.47327

24 33
87 54
135.16
67 38
22 27
45. 11
,0 42 43
,0 0 0 29
4.5 80 38
4.85 0 87
S 47396
7.33.23
S 23
7 24 00

8 9 48
4 4 44
2 2 0 4
2 1 1
24,13

S 23. 11
1 42
S. 24. 53
3 54
− S. 23

8 9 48
6 6 42
2 3 0 6
2 1 1
25 17

8.03.W.

9. 47. 20. 27. 33 = 9 48.08. 27.46

9. 49. 7 27. 57

3 39 9

9. 45. 28	28 00
7 47 13	24 53
1 58 13	87 81
	140 26
15 30	70 13
14 4	28 00
29.34	42.13

9. 45. 28. 28.00

7 49 20 24 24

1 55 08 87.31

28.02 139 57

69.58

2800

41.58

.04243
.00878
4.52951
4.82733
9.40805

Slew 9.51.00 8.53.42

Sextant 9.53.00 8.53.40

7. 56. 54
9 41
7.47.13

S 90. E

.04073
.00041
4.53475
4.82523
9.40114

7. 58. 01
9 41
7 48 20

2. 32. 00
2 00
2 34 00
4 42
2 29 18
90 00.00
87.30.42

9. 44. 08
1 42
9. 43 50
4 42
= 9.41 08

8948
6807
2141
234
24.19

8. am.

9 47. 51. 27.58

9 48 09. 28. 14

3 37 9

9. 46. 32 = 2823

9 48 22 2343

1 57 10 87.07

139.13

49.36

15 13 28.23

14 3 41.13

29.16

.03832
.00055
4.54229
4.41842
9.39958

7. 59. 23
10 1
7 49 22

9. 48. 29. 28.07

2. 57. 20
2 00
2 57 20
4 42
2 52 38
90 00.00
87.07 22

10.04 23

8948
6908
2040
23 7
23.37

"Dirige" from Honolulu to Philadelphia

Nautical Diary and Day's Work Book,

40th Week.] TUESDAY, 30TH SEPTEMBER, 1902. [273-92.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing* } { Mean Noon, S 2° 32′ 9″ / Appt. Noon, 2 32 0 } Var. 1 Hour, 58·38″ | Equation of Time, *increasing*, Add to Mean Time, 9m 44·93s. / Sub. from Appt. Time, 9 44·80 } Var. 1 Hour, 0·815s. | Sun's Semi-Diam., 16′ 0″ | Sidereal Time, 12h 33m 11·21s.

This day begins with a moderate North wind at 2 Pm. Hauled ship W W W W Middle part wind very variable the mean was W W W. with frequent squalls

Latter part squally wind shifting to North again. Headed ship to E N E at 11 Am.

Lat. by Obs., 24°19
Long. by Obs., 29°2
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., B. 30.12
Thermom., Air,
,, Sea,
Hygrometer,

40th Week.] WEDNESDAY, 1ST OCTOBER, 1902. [274-91.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing* } { Mean Noon, S 2° 55′ 30″ / Appt Noon 2 55 20 } Var. 1 Hour, 58·31″ | Equation of Time, *increasing* Add to Mean Time, 10m 4·37s. / Sub. from Appt. Time, 10 4·23 } Var. 1 Hour, 0·804s. | Sun's Semi-Diam., 16′ 0″ | Sidereal Time, 12h 37m 7·86s.

Throughout the day light Northerly winds & off land from N E to N N E W We have tacked ship three times during the day and with it all have made 42 miles to the Northward

Saw a Bark steering to the Southward

42

Lat. by Obs., 23 37
Long. by Obs., 28.12
Course by Obs.,
,, by D. R.,
Distance by Obs., 45
,, by D. R.,
,, by Log, 100
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.18
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

40th Week.] THURSDAY, 2ND OCTOBER, 1902. [275-90.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, | Mean Noon, S 3° 18′ 49″ / Appt. Noon, 3 18 39 | Var. 1 Hour, 58·23″ | Equation of Time, increasing, Add to Mean Time, 10m 23·53s. Sub. from Appt. Time, 10 23·39 | Var. 1 Hour, 0·792s. | Sun's Semi-Diam., 16′ 1″ | Sidereal Time, 12h 41m 4·41s.

Throughout this day we have had the wind from North. from a moderate to a fresh breze. We have tacked ship twice; Sailed 130 miles and have made 26 miles Northing.

We are cemeing. its only a question of time

Lat. by Obs., 23.11
Long. by Obs., 29 07
Course by Obs.,
,, by D. R.,
Distance by Obs., 26
,, by D. R.,
,, by Log, 110
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.15
Thermom., Air,
,, Sea,
Hygrometer,

40th Week.] FRIDAY, 3RD OCTOBER, 1902. [276-89.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, | Mean Noon, S 3° 42′ 6″ / Appt. Noon, 4 41 55 | Var. 1 Hour, 58·13″ | Equation of Time, increasing, Add to Mean Time, 10m 42·39s. Sub. from Appt. Time, 10 42·25 | Var. 1 Hour, 0·779s. | Sun's Semi-Diam., 16′ 1″ | Sidereal Time, 12h 45m 0·97s.

This day begins with a fresh northerly breze which forced us to the westward so the ship headed her course at midnight

During the middle watch the wind hauled south and remained so for the remainder of the day giving us a gentle push of three miles per hour.

That has been about our usual speed when we have had a fair wind this passage

Lat. by Obs., 21.44
Long. by Obs., 28.19
Course by Obs.,
,, by D. R.,
Distance by Obs., 83
,, by D. R.,
,, by Log, 100
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.12
Thermom., Air,
,, Sea,
Hygrometer,

☉ 26. 24. 23. 07.
☽ 28 20 23. 25
3 37 ☉

☽ 24.43 = 23 34
7 24 35 23 16
1 58 04 84 44
133 34
64 47
23 34
43.13

15 30
14 1
29.31
30
29.01

.0346 84
.0007 1
4.5957 3
4.6355 54
9.4688 2

7. 37. 10
10 31
7 24 39

☉ 27. 40. 23. 15

3. 16. 30
2 00
3 20 30
4 42
3 13 48
90 00 00
86 44 12

10. 33 39
3
−10 31
8948
6956
1930
321
23.11

8 27
24

7. 45. W. 22. ½ Lay
☉ 29. 48. 25 12
☽ 31. 13. 25. 29
3 39 10

☉ 27. 34. 23 39
7 34 17 22 00
1.53 17 84 21
134 00
67 00
23 39
41,21

15 15
13 4
28,19

.0328 3
.0008 8
4.5918 4
4.8199 8
☽ 4455 5-5

7. 44 57
10 40
7.34.17

☽ 30. 24. 23. 19
3 39 10
☽ 24. 45 = 23 29

3. 41. 53
2 00
3 43 53
4 43
3 39 12
90 00 00
86.20 48

10. 42. 45
3
−10.40

6948
7148
1800
344
21 44

8.5.W

9. 47.54 × 29.57 = 9. 48. 43. 30.08

9. 48 32. 30. 19
3 37 10
9. 43.55 = 30.29
4 52 24 20.20
1 53 31 85.44
136 45
68 22
30.28
3753

.02748
.00109
4.56663
4.78821
9.34341

6.04.23
10 58
8. 53. 24

8948
7820
1128
430
1858

4.05.09
1 54
4.07 03
3 54
4 04 09
60 00 00
65.54

111.00.81
1.34
11 2 83
-10.58

8946
7343
15403
4 7
20,10
1 20
8 30

10, 23.46. 38.37. 10.24.24, 29.00

10. 5. 08. 39.08
3 37 10
10.21.24-39 18
29 20 1850
1.52 4 85 34
14343
7151
3915
3232

.02390 8,40,38
.00130 1118
4.49347 4.29.20
4.73041
8.24928

4.26.20
6 54
4.30 13
2 54
4.27.21
96 00 00
85.33.38
-11.14

8948
7356
1354
436
1824

142

Nautical Diary and Day's Work Book, "Dirigo" from Honduras to Philadelphia

40th Week.] SATURDAY, 4TH OCTOBER, 1902. [277-88.]

NAUT. EPHEMERIS, { Sun's Declination, increasing | { Mean Noon, S 4° 5′ 20″ / Appt. Noon, 4 5 9 } Var. 1 Hour, 58·02″ | Equation of Time, increasing, Add to Mean Time, 11m 0·95s. / Sub. from Appt. Time, 11 0·81 } Var. 1 Hour, 0·766s. | Sun's Semi-Diam., 16′ 1″ | Sidereal Time, 12h 48m 57·52s.

Throughout this glourious day we have had a light breeze from South ~~that~~ has pushed us along four miles per. hour

Lat. by Obs., 20° 10
Long. by Obs., 28 23
Course by Obs.,
,, by D. R.,
Distance by Obs., 96
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.10
Thermom., Air,
,, Sea,
Hygrometer,

41st Week.] SUNDAY, 5TH OCTOBER, 1902 *(19th Sunday after Trinity).* [278-87.]

NAUT. EPHEMERIS, { Sun's Declination, increasing | { Mean Noon, S 4° 28 31″ / Appt Noon 4 28 20 } Var. 1 Hour, 57·89″ | Equation of Time, increasing Add to Mean Time, 11m 19·18s. / Sub. from Appt. Time, 11 19·04 } Var. 1 Hour, 0·752s. | Sun's Semi-Diam., 16′ 1″ | Sidereal Time, 12h 52m 54·07s.

All this day. Light South Wind's and pleasant Weather

We have Sailed six miles more than we did Yesterday

We will get there

Lat. by Obs., 18.28
Long. by Obs., 28 23.
Course by Obs.,
,, by D. R.,
Distance by Obs., 102
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.09
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelp

41st Week.] MONDAY, 6TH OCTOBER, 1902. [279-86.

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, S4° 51′ 39″ / Appt. Noon, 4 51 28 } Var. 1 Hour, 57·74″ | Equation of Time, increasing, Add to Mean Time, 11m 37·07s. / Sub. from Appt. Time, 11 36·92 } Var. 1 Hour, 0·738s. | Sun's Semi-Diam., 16′ 2″ | Sidereal Time, 12h 56m 56·6s

All this day light-unsteady airs and fine pleasant weather

We have made 48. Miles

Lat. by Obs., 17.40
Long. by Obs., 28W
Course by Obs.,
,, by D. R.,
Distance by Obs., 48
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.05
Thermom., Air,
,, Sea,
Hygrometer,

41st Week.] TUESDAY, 7TH OCTOBER, 1902. [280-85.

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, S 5°14′ 43″ / Appt. Noon, 5 14 32 } Var. 1 Hour, 57·58″ | Equation of Time, increasing, Add to Mean Time, 11m 54·59s. / Sub. from Appt. Time, 11 54·45 } Var. 1 Hour, 0·722s. | Sun's Semi-Diam., 16′ 2″ | Sidereal Time, 13h 0m 47·1s

During the past day the winds have been light and very unsteady. Toward the latter part the wind came from East a gentle breeze and it looks as if it might end in trade winds

We have sailed 74. Miles toward our Journeys End. have been ten days making the last ten degrees

Lat. by Obs., 16 26
Long. by Obs.,
Course by Obs., 28 14
,, by D. R.,
Distance by Obs., 74
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.05
Thermom., Air,
,, Sea,
Hygrometer,

S.S.W

9. 46. 17. 30. 18 S. 47. 25. 30. 24

S 48. 07 30. 35

4 51. 28
1 34
4 49 54

85 48
76 58
1 2 30
4 30
17 40

S. 04. 40. 20. 18. S. 03. 42. 20. 34

S. 04. 14 20. 43
3 37 10
S. 02. 47. 20. 53
7 05 13 17. 00
1 53 34 84. 47
12 40
61. 20
20. 53
40 27

15 15
13 9
28. 14

.0 18 40
.0 01 80
4.6 80 98
4.6 12 10
53 14 26

7. 21. 06
11 53
7 09 13

5. 14. 32
1 34
5 - 14 - 26
3.00
5 - 13 - 26
90 - 00. 00
84 - 46. 34

11. 5-4
=11 53

6946
7838
1110
3 16
16. 26

74 1 14

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, | Mean Noon, S 5° 37′ 43″ / Appt. Noon, 5 37 32 } Var. 1 Hour, 57·41″ | Equation of Time, *increasing*, Add to Mean Time, 12m 11·73s. / Sub. from Appt. Time, 12 11·59 } Var. 1 Hour, 0·706s. | Sun's Semi-Diam., 16′ 2″ | Sidereal Time, 13h 4m 43·73s.

P.M. Strong breeze this day moderate breeze from NE. to NNE

Lat. by Obs., 14·54
Long. by Obs., 28·24
Course by Obs., N 37 W
,, by D. R.,
Distance by Obs., 112
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.06
Thermom., Air,
,, Sea,
Hygrometer,

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, | Mean Noon, S 6′ 0′ 39″ / Appt. Noon, 6 0 27 } Var. 1 Hour, 57·22″ | Equation of Time, *increasing*, Add to Mean Time, 12m 28·48s. / Sub. from Appt. Time, 12 28·33 } Var. 1 Hour, 0·689s. | Sun's Semi-Diam., 16′ 3″ | Sidereal Time, 13h 8m 40·28s.

This day begins and Ends with the same old song Moderate unsteady Winds We are on the Heart of the South East Trades with the wind NE. We have not had any trade winds this passage to speak of

Lat. by Obs., 13.52 6.
Long. by Obs., 30 25.
Course by Obs.,
,, by D. R.,
Distance by Obs., 110
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct, NE
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air, 30.08
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

41st Week.] FRIDAY, 10TH OCTOBER, 1902. [283-82.

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, S 6° 23′ 30″ / Appt. Noon, 6 23 18 } Var. 1 Hour, 57·01″ | Equation of Time, increasing, Add to Mean Time, 12m 44·80s. / Sub. from Appt. Time, 12 44·66 } Var. 1 Hour, 0·671s. | Sun's Semi-Diam., 16′ 3″ | Sidereal Time, 13h 12m 26·58s.

Throughout this day we have had quite a breeze (fresh), the wind backed & we could check the yards in a bit and we have sailed 163 Miles. We have gotten to used to the three and four mile gaits that this is quite a welcome change and is duely appreciated

Lat. by Obs., 10 43
Long. by Obs., 21.4
Course by Obs.,
,, by D. R.,
Distance by Obs., 163
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.04
Thermom., Air,
,, Sea,
Hygrometer,

41st Week.] SATURDAY, 11TH OCTOBER, 1902. [284-81.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, S 6′ 46′ 16″ / Appt. Noon, 6 46 4 } Var. 1 Hour, 56·79″ | Equation of Time, increasing, Add to Mean Time, 13m 0·69s. / Sub. from Appt. Time, 13 0·55 } Var. 1 Hour, 0·653s. | Sun's Semi-Diam., 16′ 3″ | Sidereal Time, 13h 16m 33·38s.

First and middle part of this day squally Main squalls that filled the wind
Split Main Skysail Main Royal gallant Stay sail and flying jib
Saw several sail bound south
Latter part moderate breeze fine Weather

Lat. by Obs., 8. 24
Long. by Obs., 32 00
Course by Obs., N 22 W
,, by D. R.,
Distance by Obs., 151
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct, East
,, Force,
Sea,
Weather,
Barom., 30.03
Thermom., Air,
,, Sea,
Hygrometer,

24 Log

S. 53. W. 71. Log

S. 30. 44. 27. 02

S 57. 53. 27 20

3 39 10

S. 44. 14. 27 30

7 34 39 6 16

2 13 25 82. 53

11 4 39

33. 06 5 8 15

11 27. 30

33. 17 30. 49

.00240

.00336 7. 48. 13

4. 72084 13 14

4. 70952 73459

S. 43582

S. 52. 42. 27. 31

32. 00. 6. 24

33 17 5 41

1 17 2 43

12 0

77. 12 3

~ 25 W 182

100

32

1 18

24. Log

7. 08. 4

2 00

7. 10. 44

3 40

7 04 56

50 00 00

8253 4

8548 13.14

8818 =

130

714

5. 41

5. 41. 33. 17

1 18 1 54

4. 23 35. 11

7. 42. W. 84 Log

S. 48. 35. 24. 23. S. 49 37. 24. 38

S. 50. 33. 24. 52

3 36 9

S. 46. 57 = 23. 01

7 23 45 4. 23

2 21 10 82. 30

111 34

55 57

23 07

30. 52

33. 17

S. 46. 53. 23. 07

7 24 00 3 44

2 20 53 82. 31

111 16

55 38

23 07

30. 37

33. 14

24

33. 39

7. 31. 18 - 13.

2 00

7331 8

3 46

7. 25. 30

50. 00. 00

82. 30 30

8548

8534

4 13

7 33

3. 20.

24

3. 44

3. 20 35. 33

1 42 1 46

1 34 33 19

341

326

2. 21

.00127 7. 38. 45

.00373 13 00

4. 74812 7. 25. 45

4. 71100

9. 44412

5. 41. 33. 17

3 26 3538

2. 21 222

.00052

.00371

4. 75145

4. 70497

S. 44325

7. 38. 03

13 00

726 0

141-142

200.

68

26

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

42nd Week.] SUNDAY, 12TH OCTOBER, 1902 (20th Sunday after Trinity). [285-80.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, S 7° 8' 56" / Appt. Noon, 7 8 44 } Var. 1 Hour, 56·55″ | Equation of Time, increasing, Add to Mean Time, 13m 16·12s. / Sub. from Appt. Time, 13 15·98 } Var. 1 Hour, 0·633s. | Sun's Semi-Diam., 16′ 3″ | Sidereal Time, 13h 20m 29·93s.

Throughout the past day
Breeze breeze and pleasant weather.
With current and wind we have
Sailed 180. miles

12. miles N.W. current.

Lat. by Obs., 5° 41
Long. by Obs., 33 17
Course by Obs., N 28° W
,, by D. R.,
Distance by Obs., 180
,, by D. R.,
,, by Log, 164
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30. 02
Thermom., Air,
,, Sea,
Hygrometer,

42nd Week.] MONDAY, 13TH OCTOBER, 1902 [286-79.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, S 7° 31' 31" / Appt. Noon, 7 31 18 } Var. 1 Hour, 56·30″ | Equation of Time, increasing, Add to Mean Time, 13m 31·08s. / Sub from Appt. Time, 13 30·91 } Var. 1 Hour, 0·613s. | Sun's Semi-Diam., 16′ 4″ | Sidereal Time, 13h 24m 26·49s.

All this day fresh Trades;
pleasant weather.
26. Miles N.W. Current
which helped to change our
position 200 miles during the day
What a relief to get a move
on this ship.

Lat. by Obs., 8° 20
Long. by Obs., 35° 39
Course by Obs., N 48 W
,, by D. R.,
Distance by Obs., 200
,, by D. R.,
,, by Log, 174
Current, 24
Var. used,
Dev. used,
Wind, Direct, ESE
,, Force,
Sea,
Weather,
Barom., 30. 04
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

42nd Week.] TUESDAY, 14TH OCTOBER, 1902. [287-78.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, | Mean Noon, S 7° 53′ 59″ / Appt. Noon, 7 53 46 } Var. 1 Hour, 56·03″ | Equation of Time, increasing, Add to Mean Time, 13m 45·54s. / Sub. from Appt. Time, 13 45·40 } Var. 1 Hour, 0·592s. | Sun's Semi-Diam., 16′ 4″ | Sidereal Time, 13h 28m 23·94s.

Throughout this day fresh Trades and pleasant weather

25 Miles NW current

Lat. by Obs., 1°04
Long. by Obs., 37.56
Course by Obs., N48W
,, by D. R.,
Distance by Obs., 195
,, by D. R.,
,, by Log, 165
Current, 25
Var. used,
Dev. used,
Wind, Direct, SEbE
,, Force,
Sea,
Weather,
Barom., 30.02
Thermom., Air,
,, Sea,
Hygrometer,

42nd Week.] WEDNESDAY, 15TH OCTOBER, 1902. [288-77.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, | Mean Noon, S 8° 16′ 29″ / Appt. Noon, 8 16 7 } Var. 1 Hour, 55·75″ | Equation of Time, increasing, Add to Mean Time, 13m 59·48s. / Sub. from Appt. Time, 13 59·35 } Var. 1 Hour, 0·570s. | Sun's Semi-Diam., 16′ 4″ | Sidereal Time, 13h 32m 19·59s.

All this day fresh Trader and pliasant Weather

12 Miles Westerly Current

Current the Equator at 2 Am.

Lat. by Obs., 00.54 N
Long. by Obs., 40.14
Course by Obs., N 49.W
,, by D. R.,
Distance by Obs., 180.
,, by D. R.,
,, by Log, 168
Current, 12 W.
Var. used,
Dev. used,
Wind, Direct, ESE.
,, Force,
Sea,
Weather,
Barom., 30.02
Thermom., Air,
,, Sea,
Hygrometer,

7.10

8.26.10 16.21
3 38 8
9.22.32 16 29
6 51 57 1 34
2 30 35 8208
37.39 100.11
30.05
1629
9334

00016 7.05.42
00411 13.45
4.80731 6 51 57
4.74303
9.55461

35.

W 184. Miles

1.04. 37.56
1 32 1 32
.28. 39 28

7.33.W

10 09.43. 27.04
10.10 52 27.20
10.11 40 27.34
3 38 10
10.04.02. 27 44
7 37.29 1 25
2,30 33 82.08
111 17
55 38
27.44
27.54

37 30
8
37.38
18
37.56
35 38
2 17

00 13
00 411
4.75145
4.67018
9.42607

7.57.14
13 45
7.37.29

3.20
1 4
2.16

7.53.46
2.20
7.56.06
3 40
7 32 26
50 00 00
82.07.34

13.45
13.46
-13.45

89 46
82 56
6 52
7 54
1.04
21
1 23

18.W

8.16.07
2 20
8.18.27
3 46
98.14.47

7.23.W

8.46.32. 18.54. 9.37.11. 18.03

8.47 42. 18.11
3 38 8
8.44 04 19 19
7 04 24 00 28
2.39 40 9415
11802
5901
1919
39.42

37.56 1 04
40 14 34
218 1.38

138 118
W 49. W 180

00.54 40,14
1 36 1 1
2,24 = 41.13

19.59.35

89 46
80 36
9.12
8 14
54W
2 3
37

7.18.24
13 55
7.04.24

9.52150

8.02

10. 34. 07. 27. 57.
3 38 10
10. 30. 29. 28 07
7 41 24 02 24
2 49 05 98 37
129 08
30 15 64 34
12 1 28.07
42.14 36.27

10. 34. 54. 28.07
3 38 10
10. 31 16 28 17
7 42.13 2.48
2 49 03 98.34
129 42
30 15 64 5-1
12 1 28 14
42.14 36.34
12 .000 5-2
42.28 .00493
4.62838
4.77507
5.40850

8. 38. 22
2 20
8 40 42
+50 - 3 20
58. 37. 22

14.18
8948
7755
1130
841
3.09
21
48

.000 38
.004 93
4.632 92
4.77387
5.41210

7. 55. 42
14 18
7.41 24

42.28. 3.09
40 14 34
2.14 2.15
120 135
134 133

3.09. 42.28
113 36
4.22 4238
11 Sun

~ 45 W 181

7.41
10 31. 40. 25. 54
10 32 59. 24.12
338 9
10.29.21. 26.21
7 33.52 4 22
2 53 31 58 59
129 42
30 15 64 5-1
18 4 26.21
43.23 38.30
5 5
4328
00 124
005-36
4.62838
4.79415
5.42915
7.32.15
14 25
7 33 50

10. 32 18. 26. 02
338 9
10. 28. 40 = 26 = 11

94 40
~ 33. 113

4.41 43.28
1 17 17
5 58 43 45

9. 00. 20
2 20
9 02 40
3 20
50
58.59 20

14.25
8.58
7605
1343
52
4.41
5
33

AUT. EPHEMERIS, { Sun's Declination, *increasing*, } { Mean Noon, S8° 38′ 35″ / Appt. Noon, 8 38 22 } Var. 1 Hour, 55 45″ | Equation of Time, *increasing*, Add to Mean Time 14m 12·88s. / Sub. from Appt. Time, 14 12·75 } Var. 1 Hour, 0·547s. | Sun's Semi-Diam., 16′ 5″ | Sidereal Time, 13h 36m 16·14s.

Throughout this day moderate
Trades pleasant weather
50. Miles NW. Current

Lat. by Obs., 3. 09
Long. by Obs., 42.28
Course by Obs., N 45 W
,, by D. R.,
Distance by Obs.,
,, by D. R., 191
,, by Log, 140
Current,
Var. used,
Dev. used,
Wind, Direct, SE by E
,, Force,
Sea,
Weather,
Barom., 30.07
Thermom., Air,
,, Sea,
Hygrometer,

UT. EPHEMERIS, { Sun's Declination *increasing*, } { Mean Noon, S°9 0′ 42″ / Appt. Noon, 9 0 29 } Var. 1 Hour, 55·14″ | Equation of Time, *increasing*, Add to Mean Time, 14m 25·72s. / Sub. from Appt. Time, 14 25·59 } Var. 1 Hour, 0·523s. | Sun's Semi-Diam., 16′ 5″ | Sidereal Time, 13h 40m 12·70s.

All this day light breze
and pleasant Weather
17 Miles NW Current
between 2 and 4 AM. Saw
a total Eclipse of the Moon.

Lat. by Obs., 4. 41
Long. by Obs., 43.28
Course by Obs., N 38 W
,, by D. R.,
Distance by Obs.,
,, by D. R., 113
,, by Log, 96
Current, 17
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29.95
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Diriga" from Honolulu to Philadelphia

42nd Week.] SATURDAY, 18TH OCTOBER, 1902. [291-74.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, } { Mean Noon, S9° 22′ 42″ / Appt. Noon, 9 22 28 } Var. 1 Hour, 54·81″ | Equation of Time, *increasing*, Add to Mean Time, 14m 37·97s. / Sub. from Appt. Time, 14 37·85 | Var. 1 Hour, 0·498s. | Sun's Semi-Diam., 16′ 5″ | Sidereal Time, 13h 44m 9·25s.

Throughout this day moderate breeze and pleasant weather. Wind unsteady from South to East. Heavy overfalls during the latter part of the day.

Lat. by Obs., 6°23
Long. by Obs., 43 40
Course by Obs.,
,, by D. R.,
Distance by Obs., 102
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29 95
Thermom., Air,
,, Sea,
Hygrometer,

43rd Week.] SUNDAY, 19th OCTOBER, 1902 *(21st Sunday after Trinity).* [292-73.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, } { Mean Noon, S9° 44′ 33″ / Appt. Noon, 9 44 20 } Var. 1 Hour, 54·46″ | Equation of Time, *increasing*, Add to Mean Time, 14m 49·62s. / Sub. from Appt. Time, 14 49·51 | Var. 1 Hour, 0·473s. | Sun's Semi-Diam., 16′ 5″ | Sidereal Time, 13h 48m 5·80s.

All this day light breezes from South weather over east the greater part of the day

30 miles Easterly current

Lat. by Obs., 7 38
Long. by Obs., 48.7
Course by Obs.,
,, by D. R.,
Distance by Obs., 76
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29.97
Thermom., Air,
,, Sea,
Hygrometer,

7.46

10. 82 12. 25.08
10 33 53 26.31
3 37 9
10. 30 16 25 40
7 37. 4 8.00
2 53 12 100.03
133 45
30 15 46 52
13 4 25 46
43.19 41.12

.000 425
.00476
4.59425
4.81868
5.42394

7.52.04
15.00
7.37.04

10. 33.02 = 25 19

15

10.06.03
2 20
10 08 23
90 3 24
100.03 03

8948
7123
1825
10 4
8 19

10. 29 47 = 24.20
10. 30 27 = 24 32
10. 31 13 = 24 41
3 37 9
10 27 34 24.50
7 34 30 8 45
2 53 04 100 28
134 03
30 13 67 01
13 1,36 24 30
43,1430 42.17

.00508
.00729
4.59154
4.82705
5.43100

7.49.40
15 10
7, 3430

10.27.87 15.10
2 20
10 29 37
90 2 20
100.27 37

8948
7017
1931
10 20
8 01

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

43rd Week.] MONDAY, 20TH OCTOBER, 1902. [293-72.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, } { Mean Noon, S10° 6′ 16″ / Appt. Noon 10 6 3 } Var. 1 Hour, 54·10″ | Equation of Time, *increasing*, Add to Mean Time 15m 0·65s. / Sub. from Appt. Time, 15 0·54 } Var. 1 Hour, 0·446s. | Sun's Semi-Diam., 16′ 6″ | Sidereal Time, 13h 52m 2·36s.

Throughout this day light baffling airs and calm

Rain squalls the first part

Overcast middle part

Latter part clear weather very Hot.

Lat. by Obs., 8° 19
Long. by Obs., 43 19
Course by Obs.,
,, by D. R.,
Distance by Obs., 45
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.97
Thermom., Air,
,, Sea,
Hygrometer,

43rd Week.] TUESDAY, 21ST OCTOBER, 1902. [294-71.]

NAUT. EPHEMERIS, { Sun's Declination *increasing*, } { Mean Noon, S10° 27′ 50″ / Appt. Noon, 10 27 37 } Var. 1 Hour, 53·73″ | Equation of Time, *increasing*, Add to Mean Time, 15m 11·02s. / Sub. from Appt. Time, 15 10·92 } Var. 1 Hour, 0·419s. | Sun's Semi-Diam., 16′ 6″ | Sidereal Time, 13h 55m 58·91s.

~~All~~ This day light airs baffling from S. ~~&~~ to West

pleasant weather very warm

88.08

Lat. by Obs., 8°17
Long. by Obs., 43.17
Course by Obs.,
,, by D. R.,
Distance by Obs., 42
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.03
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book. "Diriga" from Honolulu to Philadelphia

43rd Week.] WEDNESDAY, 22ND OCTOBER, 1902. [295-70.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, { Mean Noon, S10° 49′ 15″ / Appt. Noon, 10 49 2 } Var. 1 Hour, 53·34″ | Equation of Time, *increasing*, Add to Mean Time, 15m 20·73s. / Sub. from Appt. Time, 15 20·63 } Var. 1 Hour, 0·391s. | Sun's Semi-Diam., 16′ 6″ | Sidereal Time, 13h 59m 55·46s.

~~All~~ this day Moderate & hazy
Wind from South to W N W
With frequent rain squalls

Where are the North East Trades
We are a long way within the
limits of them

Lat. by Obs., 10.26
Long. by Obs., 43 21
Course by Obs.,
,, by D. R.,
Distance by Obs., 88
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29.90
Thermom., Air,
,, Sea,
Hygrometer,

43rd Week.] THURSDAY, 23rd OCTOBER, 1902. [296-69.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, { Mean Noon, S11° 10′ 31″ / Appt. Noon, 11 10 17 } Var. 1 Hour, 52·93″ | Equation of Time, *increasing*, Add to Mean Time, 15m 29·76s. / Sub. from Appt. Time, 5 29·67 } Var. 1 Hour, 0·362s. | Sun's Semi-Diam., 16′ 6″ | Sidereal Time, 14h 3m 52·01s.

This day begins with Light
baffling winds. Calms. & Rain Squalls
Middle and latter part light
airs from N & E

Lat. by Obs., 11.09
Long. by Obs., 44 10
Course by Obs., N W W
,, by D. R.,
Distance by Obs., 65
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30,88
Thermom., Air,
,, Sea,
Hygrometer,

7, 57 W

10. 49. 41. 28, 28 .. 10. 50. 31. 28. 39

3 37 10

10 46 04 28-38
7 32 41 10 00
2 53 23 100 48
39 13 13 9 2 4
8 4 6 6 4 8
43,21 2 4 3 8
41,05

.00665
.00776
4,5-3991
4.81747
5.37199

4, 04. 07
15 20
7 52 41

7,42

10 28 09. 22,33
10 29 44 22, 42
10 29, 21 22, 49
3 37 9
10, 25. 44 = 22,38
2 29 35 10 50
2 54 03 107 13
135 01
30 67 30
14,1 22 38
44,1 44,32
5
4410

.00781
.00838
4,5-82284
4,84592
5,44495
7 46, 08
15 28
7 25 39

15; 20

10, 49 02
2 20
10 31 22
+50 - 3,20
100 48 02

89 48
64 31
25 17
10 51
10.24

43,21 10,24
44 10 11 5
49, 43
N 41 W 65

11. 10. 17
2 16
11. 12 35
20 4 00
101, 08, 33

15, 29, 67
1 20
15, 31, 28
2 42
15 28. 41

89 48
67 24
22 24
11 13
11; 09

15.38

10.36-28. 23.14 10.36 24.0 23.28 11.31.22
218
11.33 40
56 4.0
107.29 40

10 37.22. 23.41
3 34 9
10.33 45 23.50
4 34 32 11 25
2.59 13 107 30
106 45
66 22
23 50
44.32

89.44
44 59
2.2 45
1 11 34
11.15

30 45
14 3
44.48

.00810 7.50.16
.00481 15.38
4.34 463 7 34 32
4.84 352
5.42 946

7.30

10.19.30. 18.40
10.20 16 18 50
10.20 48. 14.56
3 34 8
10.17.12 = 19 06
7 14 31 11 30
3.02 41 10 31
132 27
45 30 44 13
10 19.06
45.40 47 07
8
45.48

.00487
.00834
4.605 61
4.84 495
5.48673

7.30.16
15 43
7 14 31

14.52.17
218
11 54 35
50 400
107.64

8948
6612
2336
1135
1141

13.43

8948
6610
2338
1135
11.43
2
11.41
13
11 28

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

43rd Week.] FRIDAY, 24TH OCTOBER, 1902. [297-68.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, } { Mean Noon, S 11° 31′ 36″ / Appt. Noon, 11 31 22 } Var. 1 Hour, 52·51″ | Equation of Time, *increasing*, Add to Mean Time, 15m 38·08s. / Sub. from Appt. Time, 15 38·00 } Var. 1 Hour 0·332s. | Sun's Semi-Diam., 16′ 7″ | Sidereal Time, 14h 7m 48·57s.

Throughout this day light airs and calms
airs from N. to NNW

Very Hot Weather

Lat. by Obs., 11.15
Long. by Obs., 45.00
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R., 60
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29.91
Thermom., Air,
,, Sea,
Hygrometer,

43rd Week.] SATURDAY, 25TH OCTOBER, 1902. [298-67.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, } { Mean Noon, S 11° 52′ 31″ / Appt. Noon, 11 52 17 } Var. 1 Hour, 52·07″ | Equation of Time, *increasing*, Add to Mean Time, 15m 45·69s. / Sub. from Appt. Time, 15 45·61 } Var. 1 Hour, 0·302s. | Sun's Semi-Diam., 16′ 7″ | Sidereal Time, 14h 11m 45·12s.

All this day light NNE. airs
Therm. 90° in the shade

16 Miles Westerly Current

Lat. by Obs., 11 41
Long. by Obs., 45.48
Course by Obs., NNW
,, by D. R.,
Distance by Obs., 55
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.90
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" **from** Honolulu **to** Philadelphia

44th Week.] SUNDAY, 26TH OCTOBER, 1902 *(22nd Sunday after Trinity).* 299-66.]

NAUT. EPHEMERIS,	Sun's Declination, *increasing,*	Mean Noon, S 12° 13′ 15″ / Appt. Noon, 12 13 1	Var. 1 Hour, 51·61″	Equation of Time, *increasing,* Add to Mean Time, 15m 52·57s. / Sub. from Appt. Time, 15 52·50	Var. 1 Hour, 0·271s.	Sun's Semi-Diam., 16′ 7″	Sidereal Time, 14h 15m 41·67s.

Throughout this day Light airs from N.E. Clear pleasant weather Very warm.

16 Miles Westerly Current

Lat. by Obs., 12 24
Long. by Obs., 46 32
Course by Obs., N 81½ W
,, by D. R.,
Distance by Obs., 62
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29 89
Thermom., Air,
,, Sea,
Hygrometer,

44th Week.] MONDAY, 27TH OCTOBER, 1902. [300-65.]

NAUT. EPHEMERIS,	Sun's Declination, *increasing,*	Mean Noon, S 12° 33′ 48″ / Appt. Noon, 12 33 34	Var. 1 Hour, 51·13″	Equation of Time, *increasing,* Add to Mean Time, 15 m 58·71s. / Sub. from Appt. Time, 15 58·64	Var. 1 Hour, 0·240s.	Sun's Semi-Diam., 16′ 7″	Sidereal Time, 14h 19m 38·23s.

This day Begins With a light breeze from N.E.
at 10 P.m. Wind Veered S.E. baffling from there to East Moderate breeze Sharp lightning throughout the night
15 Miles West Current

Lat. by Obs., 13°42
Long. by Obs., 47.43
Course by Obs., N42W
,, by D. R.,
Distance by Obs., 106
,, by D. R.,
,, by Log,
Current, 16' West
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29 87
Thermom., Air,
,, Sea,
Hygrometer,

7.50 W

10. 43. 57 23, 27
10. 42 08 23 40
10. 45 53 23. 50
3 37 9
10. 42. 14 = 23 59
7 34 32 12 00
3 05 44 102 11
138 10
46 13 4905
46 24 2359
43 32 45.02
.00860
.00989 46.24
4.35248 45 48
4.45024 34
9.42241
7.52.24
13 32
7 38 32

11.41 45.48
12 24 46 32
43 44

N 81½ W 62

N 65 7.30

15.5-2

12, 13.07
2 14
12 13 19
90 4 00
102 11 19

88 48
65 09
23 39
12 15
12.24.
19
43

10. 29. 43 18.57
10. 30. 28 19.07
10. 31 12 19.17
3 37 8
10. 27. 35 = 19.23
7 14 54 13.24
3 10 37 102 32
135 21
67 40
19 23
48.15
45 30
2 9
47.39
47.45
.01158
.01047
7, 32.52 4,585-64
13 56 4.87277
7.16 56 9.44117

12.24. 46 32
13 43 47 45
1, 18 1, 13

78. 77

N 42 W. 105-

15.5-8

12.33.54
2 18
12.35.52
90 4.00
102.31.52

89.48
63 30
26 18
12 34
13.42
1 23
15,05

N 117 @ 4.50

7.47. W

10. 44. 47. 20. 29
10 45 53. 20 41
10 46. 56 20. 65-
3 36 8
10. 43. 20 21 03
7 29 9 15. 03
3 14 11 102 52
139 00
48 00 48 00
3 9 21 03
48.33 48.27
5
46 42
.015-23
.011 04
7. 43. 13 4.5-4433
14 04 4.484 12
7.29.09 5.44472

13. 42. 47. 45
13 24 48 42
1 42 57

102. 57

N 29 W 117

13. 24. 48.42
1 17 120
14.41 3002

16.04

12. 5-3. 57
2 18
12 56 14
90 4 02
102. 52. 14

89 48
61 28
28 20
12 56
13. 24

N 108 W. 6. 25

7.37

10. 37. 21. 16.42
10. 38 17. 16.53
10. 38. 58 17.03
3 36 8
10. 33. 22 = 17.11
7 14 57 14 41
3 20 25 103.13
13706
50.04 6832
21 1711
50.27 5-121
.01868
.01146
4.54343
4.89244
5.44641
7. 31. 05-
14 08
7 14 57

10. 35. 22 17.11
14 37
10313
13701
6430
1711
51.18
.01853
.01166
4.53408
4.89213
5.44640
13.24 = 48 42
14 24 50 27
1 24 1,46

16.08

13. 14. 06
2 45
13. 14. 31
50 3 49
103. 13. 02

88 48
58 43
30 05
13 17
16. 48
11
37

Sat 3d. 21 dist
84. 107

N 50. W 132

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

44th Week.] TUESDAY, 28TH OCTOBER, 1902. [301-64.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, } { Mean Noon, S12°54′ 9″ / Appt. Noon, 12 53 56 } Var. 1 Hour, 50·64″ | Equation of Time, *increasing*, Add to Mean Time, 16m 4·10s. / Sub. from Appt. Time, 16 4·04 } Var. 1 Hour 0·209s. | Sun's Semi-Diam., 16′ 8″ | Sidereal Time, 14h 23m 34·78s.

This day begun with heavy squalls of wind and rain not much wind between the squalls middle part not any squalls but light breeze from SE. which continued during the remainder of the day Saw a Bark steering SW.

Lat. by Obs., 16° 24
Long. by Obs., 48 42
Course by Obs., N 29 W
,, by D. R.,
Distance by Obs., 117
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29 85
Thermom., Air,
,, Sea,
Hygrometer,

44th Week.] WEDNESDAY, 29TH OCTOBER, 1902. [302-63.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, } { Mean Noon, S13° 14′ 19″ / Appt. Noon, 13 14 5 } Var. 1 Hour, 50·13″ | Equation of Time, *increasing*, Add to Mean Time, 16m 8·73s. / Sub. from Appt. Time, 16 8·68 } Var. 1 Hour, 0·177s. | Sun's Semi-Diam., 16′ 8″ | Sidereal Time, 14h 27m 31·33s.

Throughout this day moderate breeze from ESE. to SE pleasant weather

We are cruising
We are cruising
But We are cruising and full steam

Lat. by Obs., 16.96
Long. by Obs., 50, 27
Course by Obs., N 50° W
,, by D. R.,
Distance by Obs., 133′
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29.97
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

44th Week.] THURSDAY, 30TH OCTOBER, 1902. [303-62.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, | Mean Noon, S 13° 34'16" / Appt. Noon, 13 34 2 } Var. 1 Hour, 49·60" | Equation of Time, increasing, Add to Mean Time, 16m 12 59s. / Sub. from Appt. Time, 16 12 55 } Var. 1 Hour, 0·145s. | Sun's Semi-Diam., 16' 8" | Sidereal Time, 14h 31m 27·38s.

First and middle part moderate breeze Overcast Latter part squally wind hauling to South. Overcast very black in the Westward Constant rain

Lat. by Obs., 18 00
Long. by Obs., 52,21
Course by Obs.,
,, by D. R.,
Distance by Obs., 130
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 25 87
Thermom., Air,
,, Sea,
Hygrometer,

44th Week.] FRIDAY, 31ST OCTOBER, 1902. [304-61.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, | Mean Noon, S13° 54' 0" / Appt. Noon, 13 53 46 } Var. 1 Hour, 49·06" | Equation of Time, increasing, Add to Mean Time, 16 m 15·68s. / Sub. from Appt. Time, 16 15·45 } Var. 1 Hour, 0·113s. | Sun's Semi-Diam., 16' 8" | Sidereal Time, 14h 35m 24·44s.

First and middle part Squalls of Wind and rain Wind from all directions Calm between Squalls

Latter part Light breze from S E to E.S.E.

Split Jib Skysail and Fore T'gs'l gallant Sail.

Lat. by Obs., 16.11
Long. by Obs., 53 39
Course by Obs., West
,, by D. R.,
Distance by Obs., 80
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 2792
Thermom., Air,
,, Sea,
Hygrometer,

N 115° W 7, 30 =

7,44

50 27
1 30
3 1 57

16,12

13,34,02
2 45
13 36 47
50 945
103,32 58

10. 54. 24. 16 17
10. 55 15 16 26
10. 56 3 16 37
3. 36 8
10. 52. 27 = 16. 45
7 24 16 17 50
3 28 11 10 33
14 0 08
7 0 04
18,42
31. 22

52. 27
45 3
52. 3
18

,02139
,01224
4,53244
4,89274
9,45905

7,40,28
16 12
7 24 16

8.30.

11 35. 40. 26. 43
11 41. 38. 27 07
3 36 10
11. 38. 02 27 11
8 04 04 16 00
3 33 58 103 52
149 03
74 31
27 11
4720

45 45
8 14
53.25
10
53.39

,02178
,01265
4,42444
4,86447
9,32775

8,20,18
14 14
4 04 04

11.40,40,26,57

53. 39. 18. 11
52 21 16 11
1 14 11

80. 11

N 82.° W. 80

18.11 53.39
44 56
16 33 54 35

16,14

13. 53. 46
2 45
13 56 31
+50 - 4 48
103, 51 42

89 48
57 40
32 08
13 57
18. 11

16,17

8,63

11,16,45 20,19
3 34 8
11 13.05 26 28
7 33 17 16 55
3 37 32 104 12
143 35
71 47
4 5 15 20 28
9 13 3 1 19
34.28

,02411
01348
4,45620
4,89244
9,42503

7,57,34
16 17
7 33 17

11 17.25, 26 27
11 18 13 20,37
3 34 8
11 14.37 20 46
7 34 41 16 55
3 37 56 104 12
143 63
4 5 15 71 54
9 14 20 46
5 4 29 91,10
10 ,02411
5 4 39 01348
4,49153
4,89152
9,42064

53,39, 18 11
5 4 39 19 2
1 31

14, 13, 17
2 43
14 14 02
+50 - 3,49
104, 12 13

8 9 48
5 4 30
3 3 18
1 4 14
1 9 02

7,52,58
16 14
7 34 41

N 40 W 49

N 116. @ 7,40

14,19

11.04.20 = 17.04

56.07. 19 43
5 4 39 18 02
1.28 43

88

83.07. 43.

N 43 W 93

7.40
11.09.09. 17.17
11.09 52 17.26
3,34 8
11.04.18 = 17.34
7 23 36 18 32
3 42 37 104 81
141 37
40 48
17 34
53, 14

,02574
,01412
4,51702
4,80364
9,46056

7,39,58
14 18
7 25 39

14, 32, 34
2 43
14 35 18
+20 - 3 49
104.31 30

8 8 48
5 5 26
3 4 20
1 4 33
1 9.45

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

44th Week.] SATURDAY, 1st NOVEMBER, 1902. [305-60.]

AUT. EPHEMERIS, { Sun's Declination, increasing | Mean Noon, S14° 13' 30" / Appt. Noon, 14 13 17 } Var. 1 Hour, 48·59" | Equation of Time, increasing, Add to Mean Time, 16m 17·30s. / Sub. from Appt. Time, 16 17·96 } Var. 1 Hour, 0·080s. | Sun's Semi-Diam., 16' 9" | Sidereal Time, 14h 39m 21·00s.

First and middle part light breeze and pleasant weather

Latter part rain squalls and baffling winds from SE to SW. then ESE

Saw masted ship in company

Lat. by Obs., 19 02
Long. by Obs., 54 39
Course by Obs., Vars
,, by D. R.,
Distance by Obs., 75
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29,85
Thermom., Air,
,, Sea,
Hygrometer,

45th Week.] SUNDAY, 2nd NOVEMBER, 1902 (23rd Sunday after Trinity). [306-59.]

NAUT. EPHEMERIS, { Sun's Declination, increasing | Mean Noon, S14° 32'47" / Appt. Noon 14 32 34 } Var. 1 Hour, 47·02" | Equation of Time, increasing Add to Mean Time, 16m 19·50s. / Sub. from Appt. Time, 16 19·49 } Var. 1 Hour, 0·047s. | Sun's Semi-Diam., 16' 9" | Sidereal Time, 14h 43m 17·55s.

First part - baffling winds and rain squalls

Middle part Light breeze from SSW

Latter part fresh breeze from SWbyS wind unsteady.

Six top gallant yard Vessels masts in company

We have gained on Long a little the past few hours

Lat. by Obs., 19·46
Long. by Obs., 56 07
Course by Obs., N 63° W
,, by D. R.,
Distance by Obs., 93
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29 86
Thermom., Air,
,, Sea,
Hygrometer,

M

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[45th Week.] MONDAY, 3RD NOVEMBER, 1902. [307

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, } { Mean Noon, S14° 51′ 50″ / Appt. Noon, 14 51 37 } Var. 1 Hour, 47·32″ | Equation of Time, *increasing*, Add to Mean Time, 16m 20·22s. Sub. from Appt. Time, 16 20·22 } Var. 1 Hour, 0·014s. | Sun's Semi-Diam., 16′ 9″ | Sidereal T 14h 47m

This day begins with a moderate breeze from S.E. overcast with heavy clouds

at Midnight got a heavy squall from West with torrents of rain which lasted two hours then fell calm.

Latter part light air from W.S.W. clear pleasant weather

Ship still in sight. We gained on her some yesterday but she must have gotten the breeze before we did as she is not so near.

Heavy sea from West

Lat. by Obs., 20 32
Long. by Obs. 57 33
Course by Obs. N 60 W
,, by D. R.,
Distance by Obs., 93
,, by D. R.,
,, by Log,
Current.
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29.90
Thermom., Air,
,, Sea,
Hygrometer,

45th Week.] TUESDAY, 4TH NOVEMBER, 1902. [308

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, } { Mean Noon, S15° 10′ 38″ / Appt. Noon, 15 10 26 } Var. 1 Hour, 46·71″ | Equation of Time, *decreasing*, Add to Mean Time, 16m 20·15s. Sub. from Appt. Time, 16 20·15 } Var. 1 Hour, 0·028s. | Sun's Semi-Diam., 16′ 9″ | Sidereal T 14h 51m

First part of this day light airs from West

Middle part calm with constant lightning

At 4 am. had a heavy electric squall Thunder and lightning very heavy

at daylight got a light breeze from South. that carried the remainder of the day

Heavy sea from N.N.E.

Lat. by Obs., 21,10
Long. by Obs., 54 1
Course by Obs., N 44
,, by D. R.,
Distance by Obs., 53
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29 92
Thermom., Air,
,, Sea,
Hygrometer,

16,20

14.57.34
2.54
14.54.31
+86 - 2 54
104 32 27

8.03.W

11.37.32.21.23
11.38.24.21.35
10 39. 18 21.47
3 34 4
11.36.42.21 55

15.45. 67 07
20 32 67 33
47 1 26

7 46 12
3 45 30

20.15
104 52
147 02
73 31
21 55
51.36

8.02.32
16 20
7 54 12

89 48
54 20
35 28
14 56
20 32

Lat Dep. 84
47 - 81

45 15
12 8
57 23
16
57.33

N 60 W 93

,02771
,01479
4,45292
4,89413
9.38957

N 16. W

7.45.W
11 29.05 = 18.54

11 29.57 18.04
11 30 36 18.13
3 36 8
11.27.06. 19 21
7 34 06 20 55
3 31 44 103.10
145 24
72 43
19 21
33.22

,02941
,01540
4,47290
4,90443
9.42234

16,20
15.10.26 =
2 34
15.13 20
50 2 34
105 10.26

89 48
33 24
34 23
1 13
21 10

5 8. 14 21.10
3 7 33 20.32
41 38

N 49° W 53

7,52,26
16 20
7 36 06

~~12,24,42 28,36~~

12,23,08 = 28,17
3,36 8
12,19,32 = 28,26
8 23 11 22,00
3 3 4 21 105 47
43 30 15 6 13
13 3 7806
3 4 33 2826
10 49,40
3445

,03283
8,41,28 ,01649
16 17 4,31430
8 23 11 4,84212
9,25594

8,43,00
3,33
10,39,27
36 14
1 13

8,44,00
52 14
10,36 14

8 9 48
5 1 52
3 7 5 8
1 5 5 0
2 2 0 8

7.13

8,30W

11.02.58, 11.59.	12,23,08, 28,17	15,47,17 = 16,17
11 05 30, 12 33	12 23.58 28 25	2.54
11.06 13, 12 41	12 24 42 28 36	15 30 11
3 36 7		56 2 54
11 02 37 1248	20,32,54 33	103,47 17
7 04 23 2200	22 07 38 43	
3 54 14 103,47	1 29 1 12	89 50
140 33		5 1 59
45 30 7017	89 47	3 7 51
13 3 1246	N 37. W 112	15 30
58,33 57,29	72	22,01
	40	
,03283		
,01649		
4,62811		
1,92579		
6,50342		
7.24.40		
16 17		
7 08 23		

Nautical Diary and Day's Work Book, "Durigo" from Honolulu to Philadelphia

45th Week.] WEDNESDAY, 5TH NOVEMBER, 1902. [309-56.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing* } { Mean Noon, S 15° 29′ 12″ / Appt. Noon, 15 28 59 } Var. 1 Hour, 46·08″ | Equation of Time, *decreasing*, Add to Mean Time, 16m 19·27s. / Sub. from Appt. Time, 16 19·28 } Var. 1 Hour, 0·053s. | Sun's Semi-Diam., 16′ 10″ | Sidereal Time, 14h 55m 7·21s.

First part light breeze from S ards with weather overcast and dirty

8 P.M. had a very heavy squall from West torrents of rain heavy thunder and very sharp lightning ~~flash~~ we had a half a gale up to Midnight it then fell Calm

and remained so for the remainder of the day with frequent showers of rain.

We are right in the heart of the N.E. Trades but we have not had any thing but dull cloudy weather & the eyelatus & heavy sea from northward

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs., 1/2
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air,
,, Sea,
Hygrometer,

45th Week.] THURSDAY, 6TH NOVEMBER, 1902 [310-55.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing* } { Mean Noon, S 15° 47′ 30″ / Appt. Noon 15 47 17 } Var. 1 Hour, 45·43″ | Equation of Time, *decreasing* Add to Mean Time, 16m 17·58s. / Sub. from Appt. Time, 16 17·60 } Var. 1 Hour, 0·087s. | Sun's Semi-Diam., 16′ 10″ | Sidereal Time, 14h 59m 3·77s.

The first and middle part of this day Calm. heavy swell from Northward causing the ship to roll excessively frequent rain showers first part of the day.

At midnight light airs came from North cleared off and the day ends with clear pleasant weather. We have made 112 miles in the past two days

We are cemeving

Lat. by Obs., 22°07
Long. by Obs., 58 ½ W
Course by Obs., N 37 W
,, by D. R.,
Distance by Obs., 40
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29·96
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

5th Week.] FRIDAY, 7TH NOVEMBER, 1902. [311-54.]

NAUT. EPHEMERIS,	Sun's Declination, increasing,	Mean Noon, S16° 5′ 32″ / Appt. Noon, 16 5 20	Var. 1 Hour, 44·76″	Equation of Time, decreasing, Add to Mean Time, 16m 15·07s. / Sub. from Appt. Time, 16 15·10	Var. 1 Hour, 0·121s.	Sun's Semi-Diam., 16′ 10″	Sidereal Time, 15h 3m 0·82s.

First part light breze from North
& am got a little spurt from S W,
at day light wind came from North
again and toward noon Ranles N N E
day ends with light breze from N N E
clear pleasant weather
not so much Northerly sea

Lat. by Obs., 22 08
Long. by Obs., 60 01
Course by Obs.,
,, by D. R.,
Distance by Obs., 76
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 28 56
Thermom., Air,
,, Sea,
Hygrometer,

45th Week.] SATURDAY, 8TH NOVEMBER, 1902. [312-53.]

NAUT. EPHEMERIS,	Sun's Declination, increasing,	Mean Noon, S16° 23′ 18″ / Appt. Noon, 16 23 6	Var. 1 Hour, 44·08″	Equation of Time, decreasing, Add to Mean Time, 16m 11·74s. / Sub. from Appt. Time, 16 11·78	Var. 1 Hour, 0·155s.	Sun's Semi-Diam., 16′ 10″	Sidereal Time, 15h 6m 56·88s.

Throughout this day light airs
from North to N E.
latter part a little more breeze
fine pleasant weather
Northerly Swell Ship rolling
and slatting

Lat. by Obs., 22 41
Long. by Obs., 60 38
Course by Obs., N 61 W
,, by D. R.,
Distance by Obs., 61
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.02
Thermom., Air,
,, Sea,
Hygrometer,

7.5-4

11 38 35 18 15
11 39 20 18 24

11.40 27.18 28
3 33 9
11.34.54. 18 37
7 37 34 22 15
3 57 16 104 5
14 6 57
43 45 73 24
14 4 14 37
57.49 54.51
12
60 01 .03340
58 45 .01734
1 16 4.46-413
74 4.91 237
5.41770
7.53 53
14 15
7 37 36

14,15
14.05.20
2 54
14.08 14
2 54
104.05 20

8950.
5134
3814
14 8
22.08

8.03W

11. 54. 29. 20.20
11 54 58 20.26

11.53-29 20.31
833 8
11.51.56=20.39
849 3 22,30
4 02 53 104 23
149 32
74 46
20 39
54.07
.09438
.01400
4.41964
4.90860
5.38052
8.03-14
16 11
849 03

14,11
14.23,02
2 54
14 26 00
50 2 54
104.23 06

8950
3043
3907
14 26
2241

8.02

16.04

11 30.46 17.17
11 53 33 6

11,53,02 - 17.43
11 33.30 17.54
383 6
11 30 17 18 02
7 39 56 23 43
4 10 27 106 41
148 26
62.37 74 13
10 14,102
62.47 54 17

16 40.36
234
16 43 30
80 2 34
106 40 36

8948
4908
4042
144
2358

62.47 23.58
60 56 22 41
1 48 1 17
108 77
100.47
N 52 W 127

,034632
,018448
4,434557
491951
541108
7,53,5-7
16 7
7 39 50

22.48
55
23,43
60 56
1 23
4223

11.18.21.8,46
8,40,W
12 37.30.24.26
12 38 27.24.37
12.39.17.24 47
333
12.33 44 24.36
8 17 43 24 20
4 18 01 104 58
154 14
64.30 78 07
13 24 34
64.43 33.11
,040 40
,019 33
4,313 70
4.903 39
8,27682

11.18.15.8.57
333
11.15.44.8.02
4 58 14 24 20
4 20 36 104 58
040 20
7 0 10
92
4 1 08
8,33,45-
16 02
8 17 43
,040 46
,019 33
4,083 54
4,942 38
53267
17,14,12
16 02
4 38 10

16.02
16.57.48
234
17,00 42
86 234
104.37 48
8850
48 13
41 35
14 1
2434
28.58.62 47
2435 4 43
37 136
87 107 110
N 71° W 107

46th Week.] SUNDAY, 9TH NOVEMBER, 1902 (Birth of King Edward VII.) [313-52.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, } { Mean Noon, S16° 40′ 47″ / Appt. Noon, 16 40 36 } Var. 1 Hour, 43·38″ | Equation of Time, *decreasing*, Add to Mean Time, 16m 7·60s. / Sub from Appt. Time, 16 7·65 } Var. 1 Hour, 0·190s. | Sun's Semi-Diam., 16′ 11″ | Sidereal Time, 15h 10m 53·43s.

Throughout this day we have enjoyed the benefit of a gentle breeze from N.E. by E & E. that has pushed us along 127 miles. A small favour thankfully received. Fine pleasant weather.

Lat. by Obs., 28° 6-8
Long. by Obs., 62 47
Course by Obs., N 52 W
,, by D. R.,
Distance by Obs., 127
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.09
Thermom., Air,
,, Sea,
Hygrometer,

46th Week.] MONDAY, 10TH NOVEMBER, 1902 [314-51.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, } { Mean Noon, S16° 58′ 0″ / Appt. Noon, 16 57 48 } Var. 1 Hour, 42·66″ | Equation of Time, *decreasing*, Add to Mean Time, 16m 2·02s. / Sub from Appt. Time, 16 2·68 } Var. 1 Hour, 0·225s. | Sun's Semi-Diam., 16′ 11″ | Sidereal Time, 15h 14m 49·99s.

Throughout this day light breeze Wind Barling from East to S.E. South and S.W. Lightning during the night. Day ends with clear pleasant weather

Lat. by Obs., 24 35
Long. by Obs., 64° 42
Course by Obs., 271 W
,, by D. R.,
Distance by Obs., 107
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.06
Thermom., Air,
,, Sea,
Hygrometer,

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46th Week.] TUESDAY, 11TH NOVEMBER, 1902. [315-50.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, } { Mean Noon, S 17° 14' 55" / Appt. Noon, 17 11 44 } Var. 1 Hour, 41·93" | Equation of Time, *decreasing*, Add to Mean Time, 15m 56·81s. / Sub. from Appt. Time, 15 56·88 } Var. 1-Hour, 0·259s. | Sun's Semi-Diam., 16' 11" | Sidereal Time, 15h 18m 46·54s.

This day begins with a light air from SW. 6. Pm Calm over east & raining Throughout the night Light squalls of Wind and rain from all quarters with lightning

Latter part moderate Breze from NNE pleasant weather

We are getting all the Horors

Lat. by Obs., 2605
Long. by Obs., 46°35
Course by Obs., N58W
,, by D. R.,
Distance by Obs., 57
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air, 80.06
,, Sea,
Hygrometer,

46th Week.] WEDNESDAY, 12TH NOVEMBER, 1902 [316-49.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, } { Mean Noon, S 17° 31' 33" / Appt. Noon, 17 31 21 } Var. 1 Hour, 41·18" | Equation of Time, *decreasing*, Add to Mean Time, 15m 50·18s. / Sub. from Appt. Time, 15 50·23 } Var. 1 Hour, 0·293s. | Sun's Semi-Diam., 16' 11" | Sidereal Time, 15h 22m 43·10s.

The first part light breeze from NE

Middle part fresh breeze from NE

Latter part fresh breeze rain squalls

Weather overcast. Sea from NW.

Lat. by Obs., 26 49
Long. by Obs., 47.31
Course by Obs., N 45° W
,, by D. R.,
Distance by Obs., 147
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30 13
Thermom., Air,
,, Sea,
Hygrometer,

S 45 W

12, 57, 03. 26.55 – 12, 58

12, 53 30	27 04	
4 31 53	24 50	
4 21 37	10 712	
65 13	139 05	
45 24	75 33	
11	27 04	
65 35	32 25	
	.04214	
	.01947	
	4 23 854	
	4,89937	
	92196	

8, 47, 48
15 56
8 31 53

65.35. 25.05
64 42 24 33
33 30
Sat
30 48
N 56. W 57. miles

65.35. 25.05
1 46 1 28
67.23 26 33

	N	W
NW 30	21.02	21.2
NNW 110	91 5	6 1
	112 7	8 2

13, 52

17, 11, 44
2 54
17, 14, 38
+90 – 2 34
107, 11 44

8957
4736
4220
1713
25 5

40 13
91 7
131 8 1

17, 31, 21
3 12
17, 34, 33
90 2 48
107, 31, 45

S. 55 W. 82. 8 og 9 am

13, 11, 27, 24.44 13, 12, 32, 26.52
3 33 8
13, 08, 59, 27 01
8 40 06 26 33
4 28 53 107 32
44 04
80 33
2701
33,32

67,31 24,48
65 33 23 5
1 56 144
56
116 104

67,13.
18
67,31

2433
14
2448

15, 50, 26
1 12
15-48 14
46
13, 30

Lat
104 104,3

	24,49	67,31
	152	133
N 43, W 147.	2841	68,04

.04840
.02066
4,21534
4,89946
2,14406
8, 53, 56
1560
8 40 06

8
13
23

15-by runs

7.46 W 62 Sog

12.06.12.11.31
12 08 37 12 07
12 10 14 12 17
3 33 7
12.06.41.12.24
7 26 57 28.45-
4 39 44 107.48
1457
7426
1224
4045 42,04
9 11
48.56
.05714
.02180
4.42781
4.94620
5.45-245-
7.42 40
15 43
7 26 57

8.34 W 69 Sog

12.55.59.20.38
12 56 49 20.47
12 57 34 20.55
3 33 6
12 54.01 21 03
8 13 52 28.48
4 40 09 107.48
137.40
78.50
21.03
57.47
70.02 .05727
13 .02130
70.17 4.28706-
70.17 29.13 4.92739
2731 2648 5.29301
2.44 2.24
120
164 Sea 144
Lat Obs 144-
8.29.33
15 43
8.13.52

17.47.48
3 02
17 50 40
20 2 48
107.48

8950
4246
4704
1761
29.13
24
28.49
15 Sea

N 45° W 203 miles
29.13 70.17
57
71.14
16.24

#2

12 22.04.11.43
3 33 7
12.18 35 11 50
7 32 4 31 24
4 46 27 108 04
151 20
4030 75.40
11 7 11 30
7137 43.50
12
7148 .06892
.02196
4.38384
4.95304
5.43776
7.44.32
15 24
7.32.08

7.50. 34. Sog

12,22 49=11.52
12,23,25=11 58
3.33 7
12,19,52=12.05-
7 33 22 8122
4 46 30 108 04
4030 75145
11 7 12 5
7137 63,40
12
71.49
.06822
.02196
4.38121
4.95242
5.43381
7.48.44
15 24
7 33 22

63
32
27

16.05.41
8 06
16.04 41
20 3 48
108.03 53

8930
3853
4977
1804
31.50
24
26

71.49 31.50
70 17 29 13
1.32 2.37
Dd Sal
78-15.7

N 64 W 175-

100
34,144

63

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

46th Week.] THURSDAY, 13TH NOVEMBER, 1902 [317-48.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, S17° 47′ 51″ / Appt. Noon, 17 47 40 } Var. 1 Hour, 40·42″ | Equation of Time, decreasing, Add to Mean Time, 15m 42·72s. / Sub. from Appt. Time, 15 42·80 } Var. 1 Hour, 0·328s. | Sun's Semi-Diam., 16′ 12″ | Sidereal Time, 15h 26m 39·65s.

Throughout this day fresh breeze from NE.
Rain squalls the forepart
Middle and latter part steady breeze

We have had breeze enough to get a move on the ship, and she has altered her position 204. miles

S.W. Sey

Lat. by Obs., 29 13
Long. by Obs., 70·17
Course by Obs., N 45 W
,, by D. R.,
Distance by Obs., 204
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30 22
Thermom., Air,
,, Sea,
Hygrometer,

46th Week.] FRIDAY, 14TH NOVEMBER, 1902 [318-47.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, S18° 3′ 51″ / Appt. Noon, 18 3 41 } Var. 1 Hour, 39·64″ | Equation of Time, decreasing, Add to Mean Time, 15m 34·41s. / Sub from Appt. Time, 15 34·50 } Var. 1 Hour, 0·363s. | Sun's Semi-Diam., 16′ 12″ | Sidereal Time, 15h 30m 36·21s.

Throughout the day moderate to fresh breeze fair weather
saw a steamship going SW.

Lat. by Obs., 31. 50
Long. by Obs., 71 49
Course by Obs., N 24 W
,, by D. R.,
Distance by Obs., 175
,, by D. R.,
,, by Log,
Current, 10· W
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30. 25
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

46th Week.] SATURDAY, 15TH NOVEMBER, 1902. [319-46.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, S18° 19' 33" / Appt. Noon, 18 19 23 } Var. 1 Hour, 38·84" | Equation of Time, decreasing, Add to Mean Time, 15m 25·26s. / Sub. from Appt. Time, 15 25·36 } Var. 1 Hour, 0·398s. | Sun's Semi-Diam., 16' 12" | Sidereal Time, 15h 34m 32·76s.

Strong but this day Moderate breeze and pleasant weather

Large Iron masted Ship in Company

Lat. by Obs., 34.9
Long. by Obs., 72.54
Course by Obs., N20W
,, by D. R.,
Distance by Obs., 148
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.17
Thermom., Air, 75°
,, Sea, 78°
Hygrometer,

14 Sug

47th Week.] SUNDAY, 16TH NOVEMBER, 1902 *(25th Sunday after Trinity).* [320-45.]

NAUT. EPHEMERIS, { Sun's Declination, increasing, } { Mean Noon, S18° 34' 55" / Appt. Noon, 18 34 45 } Var. 1 Hour, 38·03" | Equation of Time, decreasing, Add to Mean Time, 15m 15·27s. / Sub. from Appt. Time, 15 15·38 } Var. 1 Hour, 0·434s. | Sun's Semi-Diam., 16' 12" | Sidereal Time, 15h 38m 29·32s.

This day begins with moderat breeze from S E Weather overcast.
Middle part the same
At 1. am Sighted six Steamers all together some had four Mast Head Lights some three and some two
Latter part wind hauled East and E N E with frequent Squalls of wind & rain
at noon Temp. Water 72°

Lat. by Obs., 36 20
Long. by Obs., 74. 00
Course by Obs.,
,, by D. R.,
Distance by Obs., 140
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30,00
Thermom., Air,
,, Sea,
Hygrometer,

11, 46, 50,, 7.54

8.10

12.46.18. 13.36
1347 02 13.43

34.07 72,54
11 10
34 18 73 07

72,54. 34, 07
71 49 31 50
1 05 2 17

Lat Dep N20W 148.
137 50,09

3,40.W 60 Sog
8,23,40, 13,29
3 33 7
8,20.07-13,36

8,11W 88 Sog
13.48,08, 13,52
3 33 7
13,44,35 13 59
8 33 46 33.46
4 50 49 108 20

60 30 146 05
12 12 78 02
72 42 13 59
12 65 02
72,54

,0 4 6 @ 24
,0 2 2 4 2
4, 3 1 4 49.
4, 9 3 7 39.
5, 3 7 6 94

8 09, 11
15 24
8, 5 3, 4 6

11
15
26

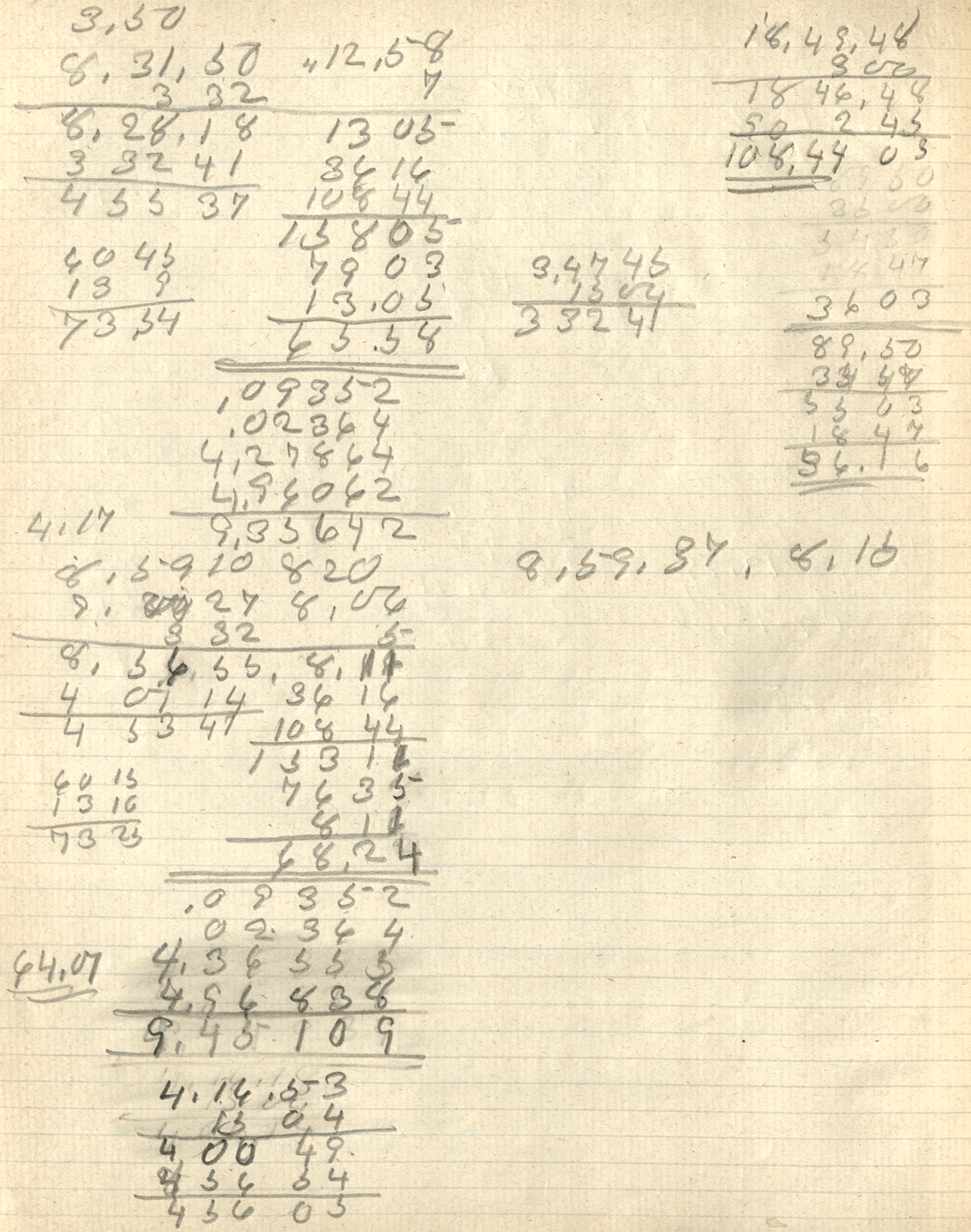
16F23

18, 19 23
3 00
14 22 23
50 2 43
104 19 34

8950
3721
5229
1822
5407

31.50, 71.49
1 36 59
33.46 72,48

8950
3721
5229
1822
5407
14,09
24
33 46



Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

47th Week.] MONDAY, 17TH NOVEMBER, 1902. [321-44.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, { Mean Noon, S18° 49' 58" / Appt. Noon 18 49 48 } Var. 1 Hour, 37·2)" } Equation of Time, *decreasing*, Add to Mean Time 15m 4·43s. / Sub. from Appt. Time, 15 4·55 } Var. 1 Hour, 0·469s. | Sun's Semi-Diam., 16' 12" | Sidereal Time, 15h 42m 25·87s.

Thr crew heard this day thick fog
Observed the temp of water 55 60° at 4 Pm
light airs from North to NE.
At 10. Pm got bottom in 27 Fathoms
at midnight Tacked Ships to E & NE
day end thick foggy light Variable airs
only 150 miles from Port
Current SW

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air, 50 10
,, Sea,
Hygrometer,

47th Week.] TUESDAY, 18TH NOVEMBER, 1902. [322-43.]

NAUT. EPHEMERIS, { Sun's Declination *increasing*, { Mean Noon, S19° 4' 40" / Appt. Noon, 19 4 31 } Var. 1 Hour, 36·35" } Equation of Time, *decreasing*, Add to Mean Time, 14m 52·75s. / Sub. from Appt. Time, 14 52·87 } Var. 1 Hour, 0·504s. | Sun's Semi-Diam., 16' 13" | Sidereal Time, 15h 46m 22·43s.

The first part gentle breeze from East
Middle part fresh breeze East and Overcast
Latter part wind unsteady with squalls
and torrents of rain. At noon the
Winds granted about 25 Fathoms
wind backed to NE & N fresh gale
Continued rain
Wore Ship to East by South

Lat. by Obs., 37. 44
Long. by Obs., 76. 38
Course by Obs.,
,, by D. R.,
Distance by Obs., 175
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 28. 80
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

47th Week.] WEDNESDAY, 19TH NOVEMBER, 1902 [323-42.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, | Mean Noon, S19° 19′ 2″ / Appt. Noon, 19 18 53 | Var. 1 Hour, 35·50″ | Equation of Time, *decreasing*, Add to Mean Time, 14m 40·22s. / Sub. from Appt. Time, 14 40·35 | Var. 1 Hour, 0·539s. | Sun's Semi-Diam., 16′ 13″ | Sidereal Time, 15h 50m 18·98s.

This day begins with a Strong Gale from NE with constant Rain

The rain continued until Midnight. The wind then Ranked varied Moderated a little.

The Middle and latter part of the day Strong breeze at times. a heavy Sea running from E.N.E.

Observed our Signals to a Steamer bound North. 8h am.

70 Dy

DR

Lat. by Obs., 36 58

Long. by Obs., 75-00

Course by Obs.,

,, by D. R.,

Distance by Obs.,

,, by D. R.,

,, by Log,

Current,

Var. used,

Dev. used,

Wind, Direct,

,, Force,

Sea,

Weather,

Barom., 30 02

Thermom., Air,

,, Sea,

Hygrometer,

47th Week.] THURSDAY, 20th NOVEMBER, 1902. [324-41.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, | Mean Noon, S19° 33′ 3″ / Appt. Noon, 19 32 55 | Var. 1 Hour, 34·62″ | Equation of Time, *decreasing*, Add to Mean Time, 14m 26·84s. / Sub. from Appt. Time, 14 26·98 | Var. 1 Hour, 0·574s. | Sun's Semi-Diam., 16′ 13″ | Sidereal Time, 15h 54m 15·54s.

This day begins with a fresh breeze from North and a heavy swell from E.N.E. At 4.0m was steering W.N.W.

Wind moderated during the night and Certainly Sea going darker

Midnight 55 Fathoms

4 am. 30. Fathoms of water 7 Am was Steering W by S.S.E 25 Fathoms

Day Ends with Clear weather light airs Baffling from North W N.W & E

Several vessels in sight have had a S.W. current

Dr

Lat. by Obs., 36°43

Long. by Obs., 74·33

Course by Obs.,

,, by D. R.,

Distance by Obs.,

,, by D. R.,

,, by Log,

Current,

Var. used,

Dev. used,

Wind, Direct,

,, Force,

Sea,

Weather,

Barom., 30.25

Thermom., Air,

,, Sea,

Hygrometer,

68
69

16,36,00 " 33.27
6 00 00
11,36,00
1 4 40
11 3 40
12 00 00
9.20 = 4.617
N 37°00 18°00 = 0.260
4.877

33.27
3
33.30
10
33 40
20 00
5 4 20
1 9 2 2
36,58

7.10 am
Sun true bearing 117.6.E
" Comp. " S 122.00
4.37 W

3,40,W 60,Sq
8,23,40 " 13.28
3 33
8,20,07 = 13.38
3 24 36
4 55 31
40 45
14 8
74,33

.0 9 9 7 18
.0 2 5 3 9
4.2 4 1 1 0
4.9 6 1 8 5
S. 3 2 5-5 2
3,39,14
14 98
3 24 36

E N E
N 124°E @ 7,30

30 Fathoms

8.47.W. = 3. Log.
13,30.03 " 16.5-2
13.30.50 " 16.5-9
13.31 42 " 17.06
3 32 8
13,28.10. 17.14
8 30 16 36 50
4 57,52 109 33
163 37
61 48
17 14
64.34

40 13
14 13
74.26

.0 9 6 70
.0 2 5 78
4,1 5-4 21
48.5 6 73
8,2 3 2 4 3

8,44,44
14 24
8 30 14

13,30,03, 16.5-2
3.32 8
13.26,31 17 00
4 28 14 36.43
4 5 4 13 109 33
163 16
61 38
17 00
64 38

60 30
14 3
74,33

.0 9 6 4 04
.0 2 5-7 5
4,1 6 2 8 9
4,9 5-5 8 7
5,2 4 0 6 9

8,42,44
14 26
8 28 18

75-00

50 Fathoms fine grey Sand

18.32 5-8
2 30
19,35 25
+90 -2 00
109.33 25
88 50
33 32
56 14
19 95
36.43

14.26.98
8 20
1423 88
220
14.26 08

18 32 5-8
3 30
19 35 25
+90 -2 00
109 33 25
88 50
33 32
56 14
19 95
36 43

14,18,53,
3 00
19 21 53
90 2 24
109 24 17

14,40,33

89,56
33 27
34 23
19 22
37 01

89 50
33 20
56 30
19 35
36 55
17

N 226, 8, 15 am N 150 E, 10 am

8, 34, W

13. 23. 52. 16. 12
14. 24 44 16. 21
13. 25 39. 16 29
3 32 4
13. 22. 07 = 16. 37
8 26 27 36 40
4 55 40 109 41
162 58
81 29
16. 37
4 52

.09574
.02615
4. 17053
4. 29. 480
924924

6. 40. 39
14 12
8 26 27

13. 22. 07 = 16. 37
8 26 00 36 20
4 57 7 109 41
162 38
81 19
16 37
14. 42

60 15
14 2
74 17

.09389
.02615
4. 17490
4. 29. 621
9. 25. 15

6. 39. 12
14 12
6 25 00

14. 12

19. 40. 35
2 30
19 43 05
90 02 00
109 41

89 60
33 44
56 06
19 43
36. 23

4. 10 am
Sun 7. B N 128. 53
Comp. Comp N 12 00
2. 09
Sums 7. B N 148. 06
" Comb N 150 00
Head N 2 W 2

180
41
139

N 139 E 9. 8 am
8. 45 W 5 1/2

6. 13. W. 4 Sun
12. 59. 43 " 11. 14
13 00 26 " 11. 22
13. 07 07 " 11. 28

13. 30 " 12. 15. 51
13. 30 59 " 16. 00
13. 31 44 " 16. 08
3 32 4
13. 28. 14 14 14

19 59. 54
2 24
20 02 18
90 1 42
110. 00. 36

89 60
31 47
58 03
20 02
38 01
14
38 45

Nautical Diary and Day's Work Book, "Dirigo" from ~~Honolulu~~ to Philadelphia

47th Week.] FRIDAY, 21ST NOVEMBER, 1902. [325-40.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing*, } { Mean Noon, S19° 46' 43" / Appt. Noon 19 46 35 } Var. 1 Hour, 33·75" | Equation of Time, *decreasing*, Add to Mean Time 14m 12·63s. / Sub. from Appt. Time, 14 12·77 } Var. 1 Hour, 0·609s. | Sun's Semi-Diam., 16' 13" | Sidereal Time, 15h 58m 12·09s.

Throughout this day light baffling Variberly airs & Calms

Have had 24 miles Southerly Current

Latter part of the day light airs from W S W

14 Sey

Lat. by Obs., 36° 23
Long. by Obs., 74 17
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 30.20
Thermom., Air,
,, Sea,
Hygrometer,

47th Week.] SATURDAY, 22ND NOVEMBER, 1902. [326-39.]

NAUT. EPHEMERIS, { Sun's Declination *increasing*, } { Mean Noon, S20° 0' 2" / Appt. Noon, 19 59 54 } Var. 1 Hour, 32·83" | Equation of Time, *decreasing*, Add to Mean Time, 13m 57·58s. / Sub. from Appt. Time, 13 57·73 } Var. 1 Hour, 0·644s. | Sun's Semi-Diam., 16' 13" | Sidereal Time, 16h 2m 8·65s.

This day begin with light breeze from West which backed to S W during the latter part of the day Weather pleasant but hazy at times

at noon was in 18 Fathoms

21 Sey

Lat. by Obs., 38° 09
Long. by Obs., 74 23
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29 85
Thermom., Air,
,, Sea,
Hygrometer,

Nautical Diary and Day's Work Book, "Dirigo" from Honolulu to Philadelphia

48th Week.] SUNDAY, 23RD NOVEMBER, 1902 *(26th Sunday after Trinity).* [327-38.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing,* } { Mean Noon, S20° 12′ 53″ / Appt. Noon, 20 12 51 } Var. 1 Hour, 31·91″ | Equation of Time, *decreasing,* Add to Mean Time, 13m 41·72s. / Sub. from Appt. Time, 13 41·87 } Var. 1 Hour, 0·678s. | Sun's Semi-Diam., 16′ 14″ | Sidereal Time, 16h 6m 5·21s.

First part moderate breeze from South to S.W.

Barometer dropping fast. At 8 Pm when in sight of both Cape May and Cape Henlopen lights the wind shifted at 10. Pm. We had a heavy squall from W.N.W. which lasted four hours and moderated to a steady gale from W.N.W.

High Seas. Ship under reefs fore & aft and my Kanakas frozen.

Yesterday Pm the Barometer fell almost two per. hour

H. Ogg

Lat. by Obs., 38 40
Long. by Obs., 73 49
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom., 29 88
Thermom., Air,
,, Sea,
Hygrometer,

48th Week.] MONDAY, 24th NOVEMBER, 1902. [328-37.]

NAUT. EPHEMERIS, { Sun's Declination, *increasing,* } { Mean Noon, S20° 25′ 32″ / Appt. Noon, 20 25 25 } Var. 1 Hour, 30·97″ | Equation of Time, *decreasing,* Add to Mean Time, 13m 25·05s. / Sub. from Appt. Time, 13 25·20 } Var. 1 Hour, 0·711s. | Sun's Semi-Diam., 16′ 14″ | Sidereal Time, 16h 10m 1·76s.

First part moderate breeze from W.N.W. which backed to West. W.S.W. and S.W. latter part strong breeze at 10 Am Were ship six miles off Barnegat light shore and stood S.S.E.

Strong breeze from S.W.b.W. and Sea rising

Lat. by Obs., 39 42
Long. by Obs., 73 54
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, Force,
Sea,
Weather,
Barom.,
Thermom., Air, 29 76
,, Sea,
Hygrometer,

8, 42, W. 97, Sog

13, 24 44. 14.45

13, 25-34, 14, 57
13, 26. 49, 15.00
3 31 7
13.23, 18 = 15.07
8 29 07 38 8.5
4 54 17 110.17
163 59
40 30 81 59
13 4 13 07
73,34 68 52

,10696
,02780
4,14445
4,96360
9,24081
8.42.42
18 47
4 29 01

20, 12, 57
2 24
20 13.18
90 1 42
110, 17

8 9 50
3 0 3 3
5 8 3 3
2 0 13
3 8, 4 0
8 9 5 0
2 8 10
6 1 4 0
2 0 2 7
4 0 1 3

8.53W 62 Sog

13, 30, 04 14.36

13 30 54, 14, 42
13 31 42 14 48
3 31 7
13, 28, 11 = 14 5.5
8 36 48 39 42
4 51 22 110 26
165 08
40 13 82 31
13 5 1 4 52
73,20 63,39

,11385
,02822
4,11474
4,95236
9,20917
8, 50, 14
13 25
8, 34, 49

13.25

20, 25 32
2 24
20 27 56
90 1 42
110, 26 14
8 9 50
2 9 40
6 0 10
2 0 28
3 9, 42

48th Week.] TUESDAY, 25TH NOVEMBER, 1902. [329-36.]

NAUT. EPHEMERIS,	Sun's Declination, *increasing,*	Mean Noon, S20°37′ 43″ / Appt. Noon, 20 37 37	Var. 1 Hour, 30·02″	Equation of Time, *decreasing,* Add to Mean Time, 13m 7·58s. / Sub. from Appt. Time, 13 7·74	Var. 1 Hour 0·744s.	Sun's Semi-Diam., 16′ 14″	Sidereal Time, 16h 13m 58·32s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, **Force,**
Sea,
Weather,
Barom.,
Thermom., Air,
,, **Sea,**
Hygrometer,

48th Week.] WEDNESDAY, 26TH NOVEMBER, 1902. [330-35.]

NAUT. EPHEMERIS,	Sun's Declination, *increasing,*	Mean Noon, S20° 49′ 32″ / Appt. Noon, 20 49 26	Var. 1 Hour, 29·05″	Equation of Time, *decreasing,* Add to Mean Time, 12m 49·33s. / Sub. from Appt. Time, 12 49·50	Var. 1 Hour, 0·776s.	Sun's Semi-Diam., 16′ 14″	Sidereal Time, 16h 17m 54·87s.

Lat. by Obs.,
Long. by Obs.,
Course by Obs.,
,, by D. R.,
Distance by Obs.,
,, by D. R.,
,, by Log,
Current,
Var. used,
Dev. used,
Wind, Direct,
,, **Force,**
Sea,
Weather,
Barom.,
Thermom., Air,
,, **Sea,**
Hygrometer,

88 80
30 08
58 42
20 32
24 50

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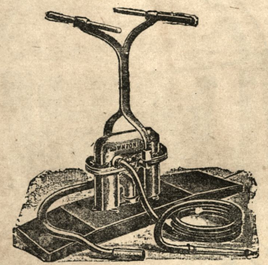
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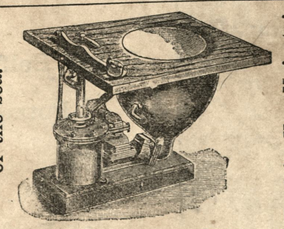
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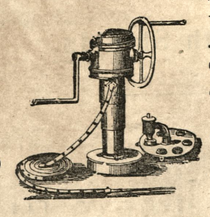
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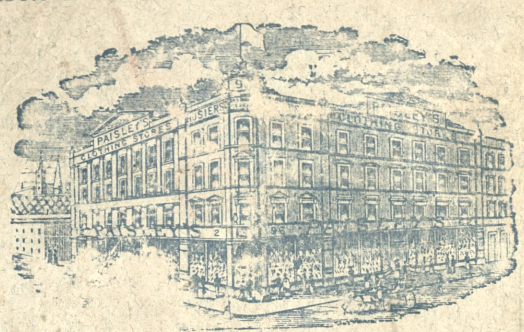
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